



AECOM

Birmingham-Montgomery-Mobile Intercity Passenger Rail Feasibility Study

January 2020

Page Intentionally Left Blank



Table of Contents

Executive Summary	vi
1.0 Study Overview	vi
2.0 Public Involvement Program	vi
3.0 Baseline Conditions.....	vi
4.0 Alternatives Development	vii
5.0 Demand and Revenue Estimation	viii
6.0 Capital and O&M Cost Estimation	viii
7.0 Cost-Benefit Evaluation.....	ix
8.0 System Planning and Assessment.....	x
1. Study Overview.....	1-1
1.1 Background.....	1-1
1.2 Passenger Rail Service in Alabama	1-1
1.3 Goals and Objectives	1-3
1.4 Phase I Study – Birmingham to Montgomery.....	1-4
1.4.1 Alternative Development.....	1-4
1.4.2 Demand and Revenue Estimation.....	1-4
1.4.3 Capital and Operating Cost Estimation.....	1-5
1.4.4 Cost and Benefit Evaluation	1-6
2. Public Involvement Program.....	2-1
2.1 Purpose of Public Involvement	2-1
2.2 Public Involvement Goals.....	2-1
2.3 Public Involvement Plan	2-1
2.3.1 Summary of Public Involvement Activities	2-1
2.4 Public Involvement Meetings.....	2-2
2.4.1 Round One – November 2018	2-2
2.4.2 Round Two – April-May 2019	2-2
2.5 Public Survey	2-2
2.5.1 Public Survey Questions	2-2
2.5.2 Public Survey Responses	2-4
3. Baseline Conditions	3-1
3.1 Study Corridor	3-1
3.2 Railroad Characteristics.....	3-1
3.3 Highway Characteristics	3-1
3.3.1 Interstate 65.....	3-1
3.3.2 US 31	3-1
3.4 Transit Service.....	3-2
3.4.1 Intercity Transportation Services.....	3-2
3.4.2 Montgomery Transit Service	3-2
3.4.3 Mobile Transit Service	3-2
3.5 Demographics	3-3
3.5.1 Study Area Population Trends	3-3
3.5.2 Environmental Justice Communities	3-4
3.5.3 Employment Trends	3-4



4.	Alternatives Development.....	4-1
4.1	Development of Alternatives	4-1
4.2	Potential Station Locations	4-3
4.2.1	Proposed Montgomery Station	4-5
4.2.2	Proposed Greenville Station	4-5
4.2.3	Proposed Atmore Station	4-7
4.2.4	Proposed Mobile Station	4-9
4.2.5	Other Potential Station Locations	4-10
4.3	Preliminary Service Schedule	4-10
4.3.1	Alternative 1	4-11
4.3.1.1	Alternative 1a	4-11
4.3.1.2	Alternative 1b	4-12
4.3.1.3	Alternative 1c.....	4-12
4.3.2	Alternative 2.....	4-13
4.3.2.1	Alternative 2a	4-13
4.3.2.2	Alternative 2b	4-14
4.3.2.3	Alternative 2c.....	4-15
4.3.3	Alternative 3	4-15
4.3.3.1	Alternative 3a	4-15
4.3.3.2	Alternative 3b	4-16
4.3.3.3	Alternative 3c.....	4-17
4.3.4	Schedule Summary	4-17
4.4	Infrastructure Improvements	4-18
4.4.1	Facility Improvements.....	4-18
4.4.1.1	Terminus Stations	4-18
4.4.1.2	Intermediate Stations.....	4-19
4.4.1.3	Vehicle Storage and Maintenance	4-19
4.4.2	Track Improvements	4-19
4.4.2.1	Alternative 1	4-19
4.4.2.2	Alternative 2	4-19
4.4.2.3	Alternative 3	4-20
4.4.3	Summary	4-20
4.5	Operating Requirements.....	4-21
5.	Demand and Revenue Estimation	5-1
5.1	Ridership and Revenue Methodology	5-1
5.1.1	Model Structure.....	5-1
5.2	Ridership Forecast	5-2
5.3	Revenue Forecast.....	5-3
5.4	Cost of Alternative Modes of Transportation	5-4
5.4.1	Private Automobile.....	5-4
5.4.2	Intercity Bus	5-4
6.	Capital and O&M Cost Estimation.....	6-1
6.1	Capital Cost Methodology.....	6-1
6.2	Capital Cost Estimates	6-1
6.2.1	Alternative 1	6-1



6.2.2	Alternative 2	6-2
6.2.3	Alternative 3	6-2
6.3	Operating and Maintenance Cost Methodology	6-3
6.4	Operating and Maintenance Cost Estimates	6-4
7.	Cost-Benefit Evaluation	7-1
7.1	Transportation Benefits.....	7-1
7.1.1	Economic and Community Benefits.....	7-1
7.1.2	CSX Railroad Benefits.....	7-1
7.1.3	Environmental Benefits	7-1
7.2	Evaluation Criteria.....	7-2
7.3	Evaluation Results.....	7-3
7.3.1	Findings	7-5
7.3.1.1	Regional Connectivity	7-5
7.3.1.2	Funding and Construction Feasibility	7-5
7.3.1.3	Ridership and Revenue versus Operating Costs.....	7-5
7.3.2	Cost-Effectiveness	7-5
8.	System Planning and Assessment	8-1
8.1	Peer System Comparisons	8-1
8.1.1	New Mexico Rail Runner Express	8-1
8.1.2	Utah Frontrunner	8-2
8.1.3	Altamont Corridor Express.....	8-2
8.1.4	Financial Viability	8-3
8.2	Phased Implementation.....	8-3
8.3	Funding Options.....	8-4
8.4	Implementation Steps	8-4
Appendix A – Additional Public Involvement Feedback.....		A-1
A.1	Write-In Answers from Online Survey	A-1
A.2	Additional Comments from Online Survey	A-2
A.3	Comments from Public Involvement Open Houses	A-6
A.4	Comments from Draft Report Public Comment Period	A-17
Appendix B – Rail Crossing Information		B-1

Figures

Figure 1: Passenger Rail in the State of Alabama.....	1-2
Figure 2: Public Survey Question #1	2-5
Figure 3: Public Survey Question #2.....	2-5
Figure 4: Public Survey Question #3.....	2-6
Figure 5: Public Survey Question #4.....	2-6
Figure 6: Public Survey Question #5.....	2-7
Figure 7: Public Survey Question #6.....	2-7
Figure 8: Public Survey Question #7.....	2-8
Figure 9: Public Survey Question #8.....	2-8
Figure 10: Public Survey Question #9.....	2-9
Figure 11: Public Survey Question #10.....	2-9
Figure 12: Public Survey Question #11	2-10



Figure 13: Public Survey Question #12.....2-10
 Figure 14: Public Survey Question #13.....2-11
 Figure 15: Public Survey Question #14.....2-11
 Figure 16: Distances and Times for Highway Travel3-2
 Figure 17: Population Density within the Study Area3-3
 Figure 18: Environmental Justice Communities3-4
 Figure 19: Corridor Alternatives4-2
 Figure 20: Corridor Alternatives with Proposed Stations.....4-4
 Figure 21: Proposed Montgomery Station Location (Alternatives 1, 2, and 3)4-5
 Figure 22: Proposed Greenville Station Location (Alternatives 1 and 2)4-6
 Figure 23: Proposed West Greenville Station Location (Alternative 3)4-7
 Figure 24: Proposed Downtown Atmore Station Location (Alternatives 1 and 2).....4-8
 Figure 25: Proposed North Atmore Station Location (Alternative 3)4-9
 Figure 26: Proposed Mobile Station Location (Alternatives 1, 2, and 3).....4-10
 Figure 27: Travel Times for Highway and Rail Modes4-17
 Figure 28: Birmingham Intermodal Terminal4-18
 Figure 29: Downtown Atmore Station4-19
 Figure 30: Total Passenger Trips on the NMRRX, 2007-20188-1
 Figure 31: FrontRunner System Map8-2

Tables

Table E1: Operating Characteristicsvii
 Table E2: Ridership and Revenue Estimationviii
 Table E3: Estimated Capital Costs ix
 Table E4: O&M Cost Estimates ix
 Table E5: Evaluation Criteria and Factors x
 Table E6: Evaluation Scores and Rankings x
 Table E7: Alternative Comparison to Peer Systems xi
 Table 1: Gulf Breeze Ticket Prices - 1994..... 1-1
 Table 2: Phase I Study Goals and Objectives 1-3
 Table 3: Phase I Report Demand and Revenue Estimates 1-4
 Table 4: Phase I Report Capital Cost Estimates 1-5
 Table 5: Phase I Study O&M Cost Estimates 1-5
 Table 6: Phase I Study Evaluation Criteria 1-6
 Table 7: Population Statistics and Projections for Terminus Communities 3-3
 Table 8: Population Statistics and Projections for Counties Along Alignment..... 3-4
 Table 9: Employment Trends in Terminus Communities..... 3-5
 Table 10: Largest Employers in Montgomery, Alabama 3-5
 Table 11: Largest Employers in Mobile, Alabama..... 3-5
 Table 12: Alternative 1a Intercity Train Schedule 4-11
 Table 13: Alternative 1b Intercity Train Schedule 4-12
 Table 14: Alternative 1c Intercity Train Schedule..... 4-13
 Table 15: Alternative 2a Intercity Train Schedule 4-14
 Table 16: Alternative 2b Intercity Train Schedule 4-14
 Table 17: Alternative 2c Intercity Train Schedule..... 4-15
 Table 18: Alternative 3a Intercity Train Schedule 4-16
 Table 19: Alternative 3b Intercity Train Schedule 4-16
 Table 20: Alternative 3c Intercity Train Schedule..... 4-17
 Table 21: Infrastructure Improvements for Each Alternative 4-21
 Table 22: Summary of Operating Requirements..... 4-22
 Table 23: Ridership Forecast for Service Alternatives..... 5-3



Table 24: Revenue Forecast for Service Alternatives	5-3
Table 25: Greyhound Bus Timetable.....	5-4
Table 26: Megabus Timetable.....	5-5
Table 27: Capital Costs for Alternative 1	6-1
Table 28: Capital Costs for Alternative 2	6-2
Table 29: Capital Costs for Alternative 3	6-3
Table 30: Annual Operating Plan Characteristics for Each Alternative - Montgomery to Mobile	6-4
Table 31: Annual Operations and Maintenance (O&M) Cost Estimates for Each Alternative	6-4
Table 32: Evaluation Criteria for Alternatives 1, 2, and 3	7-2
Table 33: Evaluation Factors for Alternatives 1, 2, and 3.....	7-3
Table 34: Evaluation Matrix for Alternatives 1, 2, and 3.....	7-4
Table 35: Cost-Effectiveness Comparison of Intercity Passenger Rail Alternatives	7-6
Table 36: Peer System Comparisons	8-3
Table 37: Funding Needs.....	8-4
Table 38: Steps for Implementation	8-5



Executive Summary

1.0 Study Overview

In December 2013, the Alabama Department of Economic and Community Affairs (ADECA) published the *Birmingham to Montgomery Passenger Rail Feasibility Study*, which examined the feasibility of restoring passenger rail service between these cities. ADECA then contracted with AECOM in 2017 to complete a second phase of this project, extending this study of passenger rail feasibility from Montgomery to Mobile. This report presents the results of that study.

The following report outlines the conceptual design for three proposed corridor alternatives and provides cost, ridership, and revenue estimates. In addition, the report details the public involvement activities that informed development and a cost-benefit evaluation for all considered service scenarios.

2.0 Public Involvement Program

Public involvement allows ADECA as the project sponsor to educate and solicit ideas from the general public (community members, stakeholders, elected officials, and other interest groups) within the Study Area. It also provides an opportunity to inform the public about the potential effects and benefits passenger rail could bring to the Birmingham-Montgomery-Mobile travel corridor, keeping them actively engaged throughout the process. The core goals for public involvement in the project are:

- Educating the public and stakeholders on the nature and findings of the Study; and,
- Creating opportunities for meaningful public engagement and feedback on the possibility of restoring passenger rail service connecting the cities of Birmingham, Montgomery, and Mobile.

To further these goals, the study team held two rounds of public and stakeholder meetings in Mobile, Atmore, and Montgomery. The goal for the first round of meetings was to inform both the public and local stakeholders about the initiation of the project and to provide background from the Phase I study. The second round presented the results of the study, including corridor alternatives, ridership forecasts, and cost estimations.

The study team also conducted an online survey aimed at capturing both current travel tendencies and public preferences on service characteristics and stop locations. Survey respondents were also given the opportunity to leave free-form, written comments for the study team.

3.0 Baseline Conditions

The Phase II study corridor extends from downtown Montgomery to downtown Mobile. Alternatives 1 and 2 follow the current CSX freight corridor, which carried Amtrak's *Gulf Breeze* train until that service was terminated in 1994. Alternative 3 follows the I-65 corridor for most of its length, providing dedicated right-of-way and allowing for higher operational speeds.

The existing CSX railroad corridor from Montgomery to Mobile stretches approximately 181 miles between the two cities and connects the smaller communities of Greenville, Georgiana, Evergreen, Brewton, Flomaton, Atmore, and Bay Minette. Freight traffic along the corridor currently averages 14 trains each day.

Interstate 65 (I-65) serves as the major roadway connection between Mobile and Montgomery. A four-lane divided limited access interstate facility for most the study segment, it widens to six lanes south of AL 158 / Industrial Highway in northern Mobile County. In Montgomery County, I-65 transitions from four lanes to eight north of US 80 / Selma Highway. In typical traffic conditions, driving from Montgomery to Mobile takes between 2 hours, 20 minutes and 2 hours, 40 minutes to cover this 169-mile corridor.



Both Montgomery and Mobile have fixed-route bus systems with transfer centers near the proposed rail stations. The M, Montgomery’s system, provided over 654,000 passenger trips in 2017 across 14 routes. The Wave Transit System in Mobile provided more than 858,000 trips along 12 routes. Greyhound and Megabus offer intercity bus service between the two communities, as well.

4.0 Alternatives Development

The Study looked at three passenger rail alternatives:

- **Alternative 1:** Restoration of *Gulf Breeze* Amtrak Service in CSX Corridor (Average Speed: 48 mph)
- **Alternative 2:** Enhanced Service in CSX Corridor (Average Speed: 70 mph)
- **Alternative 3:** New Higher-Speed Service in I-65 Corridor (Average Speed: 101 mph)

For Mobile and Montgomery, the proposed station locations were the same across the three alternatives: near Union Station and the Montgomery Multimodal Center in downtown Montgomery and near the Mobile Conference Center in downtown Mobile. Station locations varied across alternatives in intermediate communities. For Alternatives 1 and 2, proposed stations in Greenville and Atmore are located near the downtown area. However, stops for Alternative 3 are located away from the downtowns directly adjacent to I-65.

Three service schedules were created for each alternative, yielding a total of nine service scenarios (1a, 1b, 1c, 2a, 2b, 2c, 3a, 3b, and 3c). Under each alternative, revenue and cost estimates were prepared for one, three, and six daily roundtrips. A summary of the operating characteristics for these scenarios is provided below.

Table E1: Operating Characteristics

	Alternative	Speed (mph)	One-Way Route Miles	One-Way Run Time	Daily Train Trips	Annual Revenue		Lay Over Time	Cycle Time	Trains
						Train Miles	Train Hours			
Alternative 1	1a	48	277.1	5:44	1	144,623	3,328	1:12	12:45	2
	1b	48	277.1	5:44	3	433,868	9,983	1:12	12:45	4
	1c	48	277.1	5:44	6	867,737	19,967	1:12	12:45	7
Alternative 2	2a	70	277.1	3:56	1	144,623	2,284	0:50	8:45	2
	2b	70	277.1	3:56	3	433,868	6,851	0:50	8:45	3
	2c	70	277.1	3:56	6	867,737	13,703	0:50	8:45	5
Alternative 3	3a	101	257.7	2:43	1	134,506	1,479	0:34	5:40	2
	3b	101	257.7	2:43	3	403,518	4,437	0:34	5:40	2
	3c	101	257.7	2:43	6	807,035	8,874	0:34	5:40	3



5.0 Demand and Revenue Estimation

Both ridership and revenue projections increased with train speed and service frequency. Alternative 1 has the lowest ridership, as the low speed characteristics make the trip uncompetitive with driving within the same travel corridor. Alternative 2 has higher ridership due to its increased speed. Alternative 3, with an average speed of 101 miles per hour, is projected to have the highest ridership and is most noticeably competitive with driving.

Table E2: Ridership and Revenue Estimation

	Speed (mph)	Daily Round Trips	Annual Ridership	Average One-Way Fare	Passenger Revenue
Alternative 1	48	1	55,850	\$39.09	\$2,183,400
	48	3	158,500	\$38.82	\$6,153,000
	48	6	207,800	\$39.22	\$8,149,000
Alternative 2	70	1	96,960	\$39.55	\$3,834,000
	70	3	232,800	\$38.14	\$8,879,000
	70	6	338,350	\$38.80	\$13,127,000
Alternative 3	101	1	151,200	\$40.29	\$6,092,000
	101	3	392,850	\$39.04	\$15,336,000
	101	6	550,300	\$39.70	\$21,847,000

Fares were estimated using current Amtrak pricing in comparable corridors and are competitive with driving for a single passenger. Using the current Federal rate of 58 cents per mile, which accounts for fuel and vehicle wear-and-tear, the total cost of a one-way trip between Montgomery and Mobile is approximately \$98 without assuming a fee for parking. Intercity bus service comes in at a lower cost, with ticket cost ranging between \$18 and \$26.

6.0 Capital and O&M Cost Estimation

Capital costs were estimated for each alternative, including any required track work or new tracking, siding extensions, station and facility costs, and trainsets. The table below shows an overview of these costs.



Table E3: Estimated Capital Costs

System Characteristics	Alternative 1 (\$ Millions)	Alternative 2 (\$ Millions)	Alternative 3 (\$ Millions)
Geometric Improvements			
Realignments	-	\$520	-
Increased Radius of Curvature	-	\$250	-
Lengthened Transitions	-	\$55	-
New Track	-	-	\$9,015
Capacity Improvements			
Extended Sidings	-	\$135	\$100
Facilities			
Terminus Stations	\$125	\$125	\$125
Intermediate Stations	\$35	\$35	\$35
VSMF Facilities	\$130	\$130	\$110
Rolling Stock			
Trainsets	\$105	\$80	\$55
TOTAL CAPITAL COSTS:	\$395	\$1,330	\$9,440

A range of estimated operations and maintenance costs was generated using two methods: one based on cost per train mile and another based on cost per train hour. The cost per mile estimates are very similar across alternatives. Cost per train hour numbers decrease as train speed increases, as the higher speed alternatives would be in service for shorter time periods for each trip. These estimates are shown in the table below.

Table E4: O&M Cost Estimates

Range of Annual O&M Costs (2018\$ millions)	Alternative 1			Alternative 2			Alternative 3		
	1a	1b	1c	2a	2b	2c	3a	3b	3c
Based on cost per mile	\$3.2	\$9.5	\$19.1	\$3.2	\$9.5	\$19.1	\$3.0	\$8.9	\$17.8
Based on cost per train-hour	\$10.6	\$31.7	\$63.4	\$7.2	\$21.7	\$43.5	\$4.7	\$14.1	\$28.2

7.0 Cost-Benefit Evaluation

Passenger rail travel bestows a number of benefits on communities served. Such service provides additional transportation options to the public and can decrease road congestion and vehicle emissions. Fixed route transportation such as passenger rail can also be economically beneficial, especially to the areas near stations, which can see increased retail activity, increased demand for property, higher property values, and higher employment numbers.



These potential benefits inform a series of criteria and evaluation factors used to determine the cost-benefit relationship of the nine examined service scenarios, shown in the chart below.

Table E5: Evaluation Criteria and Factors

Criteria	Factors
Primary Mode Choice	<ul style="list-style-type: none"> Estimated end-to-end travel time savings Ridership per revenue train-hour
Regional Connectivity	<ul style="list-style-type: none"> Direct connections to downtown Montgomery and Mobile Connections to other activity centers
Reduction in Auto Travel	<ul style="list-style-type: none"> VMT (vehicle miles of travel) reduction in corridor Impact on regional travel and air quality
Cost-Effectiveness	<ul style="list-style-type: none"> Total capital cost Annual revenue to O&M cost percentage Annual cost per rider
Implementation / Constructability	<ul style="list-style-type: none"> Ease of constructability Funding accessibility potential Impact on freight railroad operations Benefit to adjacent or crossing highway infrastructure

The evaluation process saw scenario 2b (improved CSX corridor, 3 daily roundtrips) score highest, driven by its high ridership and relatively low capital and operating costs. Scenarios 1a and 3c scored lowest, due to low ridership and high costs, respectively. Ticket revenues as a percentage of operating cost tends to decrease as service frequency increases; although service scenarios with six daily trains (1c, 2c, and 3c) generated higher ridership, these alternatives scored lower due to their lower proportion of revenue-to-operating costs. Total scores are shown below, with a detailed breakdown and analysis in **Section 7.3** of the full report.

Table E6: Evaluation Scores and Rankings

	Alternative 1			Alternative 2			Alternative 3		
	1a	1b	1c	2a	2b	2c	3a	3b	3c
Score	24	25	26	26	27	26	25	26	24
Ranking	4	3	2	2	1	2	3	2	4

8.0 System Planning and Assessment

The Phase I report compared its findings with three identified peer systems: the New Mexico Rail Runner Express, Utah’s FrontRunner Express, and Northern California’s Altamont Corridor Express. The Phase II report updates these profiles with current data and an overview of any current or planned improvements or service reductions. Though none of these systems are a perfect comparison to the Birmingham-Montgomery-Mobile corridor, they provide a useful profile of current operating characteristics for the peer systems. Operating and capital costs for these trains are generally in line with Phase II estimates, but the peer systems all see higher projected ridership than all three Phase II alternatives.



Table E7: Alternative Comparison to Peer Systems

Criteria	New Mexico Rail Runner Express	Utah Front Runner	California ACE	Birmingham – Mobile Passenger Rail Alternatives			
				2a	2b	2c	3b
Length (route miles)	93	87	86	277.1	277.1	277.1	257.7
Trains per weekday	22	70	8	6	12	6	6
Annual ridership (2011)	1,200,000	1,600,000	700,000	--	--	--	--
Annual ridership (2017)	770,000	4,900,000	1,300,000	96,960	232,800	338,350	392,850
Percent change	-36%	206%	71%	--	--	--	--
Annual operating costs	\$28.4 M	\$34.4 M	\$21.6 M	\$7.2 M	\$21.7 M	\$43.5 M	\$14.1 M
O&M costs/trip	\$36.01	\$7.02	\$16.61	\$74.26	\$93.21	\$128.57	\$35.89
Initial capital costs/mile	\$4.0 M	\$6.9 M	\$600 K	\$7.3 M	\$7.3 M	\$7.3 M	\$55.1 M

All three Phase II alternatives would see a funding gap between costs and ticket revenue. Successfully launching passenger rail service would require a dedicated funding source to support operations and maintenance costs. All three peer systems subsidize their operations with a sales tax on the counties served; a similar revenue stream in Alabama could provide the necessary funds to pay for passenger rail operation. Further exploration of funding specific to passenger rail service would be needed and is beyond the scope of the feasibility study.

This feasibility study represents an initial step in the planning process. Should the project move forward, additional planning and coordination activities would be required before moving forward with construction. A brief overview of these activities has been provided below.

Table E8: Steps for Implementation

Item	Responsible Party	Key Stakeholders
#1 On-going coordination <ul style="list-style-type: none"> Coordination with CSX, Port of Mobile, and other relevant freight rail interests to ensure continued freight movement Coordination with FRA Continued stakeholder engagement 	ADECA MPOs: Birmingham MPO Montgomery MPO Mobile MPO RPCs: RPCGB CARPDC SARPC	CSX Local governments
#2 CSX Passenger Rail Coordination & Planning <ul style="list-style-type: none"> Selection of preferred alternative by ADECA, in coordination with CSX Continued development of implementation details 	ADECA	CSX Local governments
#3 Regional Transportation Planning Updates <ul style="list-style-type: none"> Continue the development of implementation details with input from regional planning agencies Develop passenger rail recommendations for inclusion to updates of future state and regional plans 	ADECA MPOs RPCs ALDOT	Local governments



Item	Responsible Party	Key Stakeholders
#4 Future Corridor Development Plans <ul style="list-style-type: none"> Develop FRA-format Corridor Development Plan and Service Development Plan Coordinate with FRA to determine applicable NEPA class of action and complete necessary environmental studies 	ADECA	CSX FRA MPOs RPCs
#5 Identify Dedicated Funding Sources <ul style="list-style-type: none"> Identify and secure potential sources of capital assistance, such as from FRA's Consolidated Infrastructure and Safety Improvement Program Identify and develop sources of operating funds, such as a sales or lodging tax in serviced communities 	ADECA State legislature MPOs RPCs	Local governments
#6 Develop Governance Plan <ul style="list-style-type: none"> Coordinate with local and regional stakeholders, along with the state legislature, to create or designate an operating authority 	ADECA State legislature MPOs RPCs	Local governments
#7 Partner with Railroads <ul style="list-style-type: none"> Develop a Memorandum of Understanding with CSX, the Port of Mobile, and any other rail operators within the service corridor 	Authority set up in step 6	CSX NARP ADECA Amtrak Local governments
#9 Coordinate with Local Transit Providers <ul style="list-style-type: none"> Coordinate with public transit operators in Birmingham, Montgomery, and Mobile to ensure effective integration of public transit with passenger rail. 	Authority set up in step 6	ADECA Local Governments BJCTA MATS The Wave



1. Study Overview

1.1 Background

In 2008, the State of Alabama published its *State Rail Plan*, which included an objective to study the feasibility of reinstating passenger rail service between Birmingham and Montgomery. Such service had previously been provided by Amtrak until being discontinued in 1994.

In September of 2012, the Alabama Department of Economic and Community Affairs (ADECA) contracted with HDR Engineering to study possibilities for initiating passenger rail service between Birmingham and Mobile. The results of this study were published in December of 2013 as the *Birmingham to Montgomery Passenger Rail Feasibility Study*, referred to as the Phase I report throughout this document.

ADECA then contracted with AECOM in 2017 to complete a second phase of this project, extending this study of passenger rail feasibility from Montgomery to Mobile. This report presents the results of that study.

1.2 Passenger Rail Service in Alabama

Beginning in October of 1989, the *Gulf Breeze* Amtrak train provided intercity service along the 275-mile corridor between Birmingham and Mobile. Intermediate stops included Montgomery, Greenville, Evergreen, Brewton, Atmore and Bay Minette. Riders could connect to the *Crescent* line in Birmingham, which runs between New Orleans and New York. In Mobile, riders could transfer to the *Sunset Limited*, a cross-continental train running from Los Angeles to Jacksonville, FL. Tracks along this route were damaged by Hurricane Katrina and service to Alabama was suspended. The *Sunset Limited* currently terminates in New Orleans. The *Gulf Breeze* ran once daily, departing Birmingham at 11:48 AM and arriving in Mobile at 6:08 PM. The return trip departed Mobile at 7:55 AM, arriving at 2:30 PM to allow for transfer to the *Crescent* at 2:30 PM. Passenger rail lines in the state, both current and historic, are shown in **Figure 1**.

The *Gulf Breeze* saw an annual ridership of 2,649 riders in 1993. Service was discontinued in 1994. Fares for trips in the corridor varied depending on distance traveled and ranged between \$12 and \$56. These prices are shown in **Table 1**.

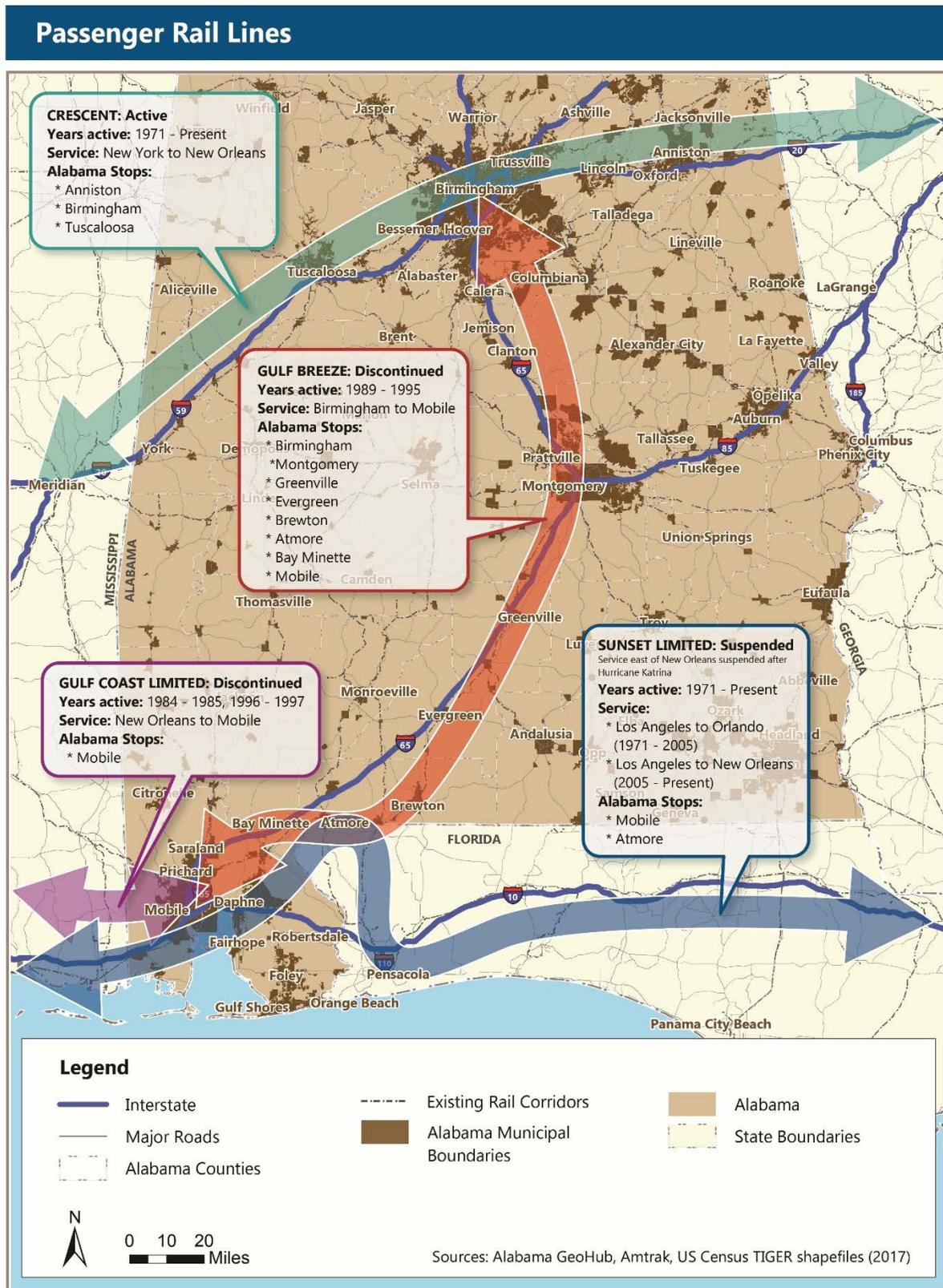
Table 1: Gulf Breeze Ticket Prices - 1994

Origin/Destination	Birmingham	Montgomery	Mobile
Birmingham	--	\$12	\$56
Montgomery	\$12	--	\$46
Mobile	\$56	\$46	--

Source: Amtrak Archives



Figure 1: Passenger Rail in the State of Alabama



1.3 Goals and Objectives

The Phase I study established five goals for passenger rail service along the corridor, along with a series of more focused objectives for each goal. These goals, which were created through coordination with local and statewide stakeholders, have been carried over into this phase of the study and are presented below in **Table 2:**

Table 2: Phase I Study Goals and Objectives

Goal	Objective
Improve transportation mobility opportunities by implementing passenger rail	Provide multimodal travel options in congested corridors.
	Provide peak period mobility option to help minimize vehicular congestion.
	Serve regional trips, as well as trips between and within urban centers.
	Maintain or improve travel times within urban centers.
Employ passenger rail to shape and encourage growth and create jobs	Reinforce multi-centered development.
	Stimulate economic development and create new job.
	Spur new development in urban centers.
Provide a seamless and cost-effective passenger rail option	Form partnership with private sector railroads (CSX) to utilize and enhance existing land and railroad right-of-way and infrastructure where possible.
	Utilize available as well as new funding sources.
	Provide cost-effective solutions.
	Plan integrated transportation services.
Promote sustainability through the implementation of passenger rail	Maintain or improve regional air quality.
	Develop transportation projects that help focus developments near urban centers.
	Provide a dependable long-term transportation solution in critical corridors.
Increase public/private cooperation to implement passenger rail	Foster public/private partnerships including private sector railroad (CSX).
	Provide public and private sector funding options.
	Develop local and regional support for passenger rail.

Source: Birmingham to Montgomery Passenger Rail Feasibility Study



1.4 Phase I Study – Birmingham to Montgomery

In December of 2013, ADECA published the *Birmingham to Montgomery Passenger Rail Feasibility Study*. Prepared by HDR Engineering, Inc, this study presented in-depth analysis regarding the feasibility of initiating passenger rail service between the cities of Birmingham and Montgomery. The Phase I study presented two potential corridor alignments: one along the CSX freight rail corridor previously used by Amtrak's *Gulf Breeze* and an alignment located mostly in the median of Interstate 65. Ridership and revenue forecasts, as well as capital and operational cost estimates, were provided for these alternatives.

1.4.1 Alternative Development

The project team that completed the Phase I study developed four alternatives for passenger rail service between the two cities:

- **Alternative 1** – restoration of the original *Gulf Breeze* service with one daily round trip between Birmingham and Montgomery with no intermediate stops,
- **Alternative 2** – service along the same corridor as Alternative 1, but with three daily round trips,
- **Alternative 3** – intercity service as presented in Alternative 2, plus intermediate rail stops in Elmore, Calera, Pelham-Alabaster and Hoover; additional trains would provide peak-time commuter service to the suburban Birmingham stops,
- **Alternative 4** – high-speed rail service along the I-65 corridor with three daily round trips.

1.4.2 Demand and Revenue Estimation

The Phase I report provides annual ridership estimates for these four alternatives and extrapolates total revenue from ticket sales using an estimated fare. These figures are presented in **Table 3** below.

Table 3: Phase I Report Annual Demand and Revenue Estimates

Alternative	Intercity Trips	Commuter Trips	Special Generator Trips	One-Way Fare Intercity Trips	One-Way Fare Commuter Trips	Passenger Revenue
Alternative 1	12,000 – 42,000	None	None	\$25 - \$30	N/A	\$300,000 - \$1,260,000
Alternative 2	36,000 – 66,000	None	None	\$25 - \$30	N/A	\$941,000 - \$1,980,000
Alternative 3	135,000 – 270,000	180,000 – 262,500	1,650 – 2,750	\$25 - \$30	\$2.50 - \$8.00	\$3,829,125 - \$10,222,000
Alternative 4	60,000 – 120,000	None	None	\$25 - \$30	N/A	\$1,500,000 - \$3,600,000

Source: *Birmingham to Montgomery Passenger Rail Feasibility Study*

Alternative 3, the option consisting of both intercity service and commuter service in the Birmingham area, showed the highest ridership and revenue projections, followed by Alternative 4, the high-speed corridor option.



1.4.3 Capital and Operating Cost Estimation

Capital estimates for the Phase I alternatives are presented below in **Table 4**. The major capital cost contributor for Alternatives 1, 2, and 3 comes from track work, mostly the addition of passing sidings needed to accommodate both passenger trains and the projected increase in freight traffic along the corridor. Alternative 4 has a higher price tag of around \$2.5 billion due to the cost of building an entirely new rail corridor, as well as the tunneling and aerial structures necessary to avoid interference with Interstate 65 and other roadways. All costs, both capital and operating, are shown in 2013 dollars.

Table 4: Phase I Report Capital Cost Estimates

Capital Cost Category	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Grading and Track Work	\$40,100,000	\$96,900,000	\$133,000,000	\$328,400,000
Highway/Road Crossings	\$12,900,000	\$18,700,000	\$20,400,000	\$3,500,000
Train Control Systems	\$36,700,700	\$51,700,000	\$61,100,000	\$119,700,000
Structures	\$1,600,000	\$28,300,000	\$35,100,000	\$1,691,000,000
Engineering & Permitting	\$14,500,000	\$31,700,000	\$40,700,000	\$330,600,000
Locomotives/Vehicles	\$16,000,000	\$16,000,000	\$47,500,000	\$16,000,000
Total	\$121,800,000	\$243,300,000	\$337,800,000	\$2,489,000,000

Source: Birmingham to Montgomery Passenger Rail Feasibility Study

Projected operational costs are shown below in **Table 5**. A cost range for O&M costs was calculated using both cost per mile and cost per train-hour.

Table 5: Phase I Study O&M Cost Estimates

Range of Annual O&M Costs	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Based on cost per mile	\$850,000	\$2,500,000	\$4,300,000	\$2,400,000
Based on cost per train-hour	\$2,000,000	\$7,600,000	\$14,500,000	\$7,400,000

Source: Birmingham to Montgomery Passenger Rail Feasibility Study



1.4.4 Cost and Benefit Evaluation

The proposed alternatives were then ranked using six evaluation criteria created using the project goals presented in **Section 1.3**. These criteria are shown below in **Table 6**.

Table 6: Phase I Study Evaluation Criteria

Project Goals	Evaluation Criteria
Primary Mode Choice	<ul style="list-style-type: none"> Will travelers save time riding the train between Birmingham and Montgomery?
	<ul style="list-style-type: none"> Will there be a sufficient number of riders using the passenger service between Birmingham and Montgomery?
Regional Connectivity	<ul style="list-style-type: none"> Does the passenger service provide direct connections to downtown Birmingham and Montgomery and/or to other activity centers?
Reduction in Auto Travel	<ul style="list-style-type: none"> Does the passenger service reduce auto travel in the corridor, thereby improving air quality?
Cost-effective Measure	<ul style="list-style-type: none"> Is the investment in a passenger rail system between Birmingham and Montgomery economically feasible based on cost-effectiveness measures: capital, O&M costs, and cost per rider?
Implementation/Constructability	<ul style="list-style-type: none"> What is the degree of ease or difficulty construction and/or implementing passenger rail between Birmingham and Montgomery?

Source: *Birmingham to Montgomery Passenger Rail Feasibility Study*

Alternative 3, which used existing CSX right-of-way and provided additional commuter rail service in the Birmingham metro area, scored highest in the above criteria. By adding peak-hour commuter service, this alternative offered the highest ridership as well as the lowest cost-per-rider of the four options studied.



2. Public Involvement Program

2.1 Purpose of Public Involvement

Public involvement allows ADECA as the project sponsor to educate and solicit ideas from the general public (community members, stakeholders, elected officials, and other interest groups) within the Study Area. It also provides an opportunity to inform the public about the potential effects and benefits passenger rail could bring to the Birmingham-Montgomery-Mobile corridor, keeping them actively engaged throughout the process.

2.2 Public Involvement Goals

The core goals for public involvement in the project are:

- Educating the public and stakeholders on the nature and findings of the Study; and,
- Creating opportunities for meaningful public engagement and feedback on the possibility of restoring passenger rail between Birmingham, Montgomery, and Mobile.

Connecting with stakeholders and the public early in the process and supplying a continual stream of accurate information is essential to the success of the project. Inviting participation in the process is also critical for collecting input on local issues that would impact the project, and development and evaluation of alternatives. The stakeholders, the general public, affected agencies and elected officials must be offered the mechanisms to communicate their perceptions, opinions, and ideas throughout the entire course of the project.

2.3 Public Involvement Plan

To guide the project team toward achieving these goals, a Public Involvement Plan was created at the beginning of the planning process. This plan identified key stakeholders in the study area, outlined the public outreach activities to be held during the outreach period, and defined the necessary strategies, tactics, and materials needed to reach members of the general public.

2.3.1 Summary of Public Involvement Activities

The following public involvement activities were conducted for the project:

- Conducting a public opinion survey;
- Conducting Public Information Open Houses (PIOHs);
- Coordinating with relevant stakeholders;
- Providing public information and updates on the project to the public and stakeholders regarding the project progress and findings through the ADECA website, social media, project collateral at community centers, and other tools and techniques; and,
- Soliciting, documenting, and responding to public comments.



2.4 Public Involvement Meetings

2.4.1 Round One – November 2018

A first round of public meetings was held in three locations throughout the study corridor – Mobile, Atmore and Montgomery on November 13, 14, and 15, 2018 respectively. These meetings were designed to inform the public of the study's initiation and solicit feedback to guide study development. Approximately 40 people attended the three meetings; attendees included public officials, press, and the general public. Each meeting was held in an open-house format, with attendees allowed to review boards with study information and speak with members of the project team. Comment cards were available, and a court reporter was on hand to transcribe any oral comments that attendees offered.

2.4.2 Round Two – April-May 2019

A second round of public meetings were held in Mobile on April 29, Atmore on April 30, and in Montgomery on May 1 of 2019. These meetings were held in an open-house format similar to the first round of engagement meetings. At these meetings, attendees were able to review boards with the result of the study's planning processes. Potential alignment alternatives with relevant ridership and cost information were shown on boards and a computer station was available, allowing attendees to navigate an interactive map of the corridor alternatives. As with the prior round of meetings, comment cards and a court reporter were present to collect responses.

2.5 Public Survey

An online survey was conducted to solicit feedback from residents in the study area using the internet survey tool SurveyMonkey. This questionnaire was open from October 17, 2018 to June 17, 2019. Survey respondents were asked questions about their travel habits, their likelihood of riding passenger rail, and what amenities and destinations would make this an attractive service. The survey questions are listed below, with results presented in the following section.

2.5.1 Public Survey Questions

Online survey respondents were asked 15 questions, shown below:

Q1. How often do you drive between Montgomery and Mobile?

- 3 or more times/week
- 1-2 times/week
- 12 times/month
- 1-2 times/year
- Not at all

Q2. How often do you drive between Birmingham and Mobile?

- 3 or more times/week
- 1-2 times/week
- 12 times/month
- 1-2 times/year
- Not at all

Q3. What is the main reason you visit Montgomery or Mobile?



- Work
- Business
- Trips to Doctor/Hospital
- Shopping
- Personal Business
- Leisure
- N/A

Q4. How satisfied are you with your current travel experience between the two cities?

- Very satisfied
- Somewhat satisfied
- Not very satisfied
- Not at all satisfied

Q5. How often do you encounter traffic congestion or delays when traveling between the two cities?

- Most of the time
- Occasionally
- Not very often

Q6. Have you experienced travel delays due to highway/roadway construction in the past two years?

- Yes
- No

Q7. Would you consider traveling by train between the two cities?

- Yes
- No

Q8. If you answered "Yes" to question 7, please select which types of trips you would consider traveling by train for (select all that apply).

- For work
- For business trips
- For medical trips
- For shopping trips
- For personal trips
- For leisure trips

Q9. How often do you currently use public transit in Montgomery or Mobile?

- 3 or more times/week
- 1-2 times/week
- 1-2 times/month
- 1-2 times/year
- Not at all

Q10. How often would you ride the train between the two cities if the service was available?

- 3 or more times/week
- 1-2 times/week
- 1-2 times/month



- 1-2 times/year
- Not at all

Q11. How frequently would the train service need to run between the two cities to make it a viable option for you?

- Every hour
- Every 4 hours (3 trips/day)
- Once a day

Q12. What do you feel is an acceptable amount for you to pay for one-way train travel between the two cities?

- Less than \$15
- \$15 - \$30
- \$30 - \$45
- More than \$45

Q13. What types of amenities should be offered on board while riding the train? Please choose three.

- Wi-Fi
- "Airline" seats
- Luggage racks
- Restroom
- Electrical outlets
- On-board bicycle racks
- Other (please specify)

Q14. What other destinations would you be interested in traveling to by train? (Select all that apply.)

- Birmingham
- New Orleans
- Atlanta
- Tuscaloosa
- Huntsville
- Pensacola
- Tallahassee
- Columbus
- Other (please specify)

Q15. Do you have any other comments regarding train service between Montgomery and Mobile?

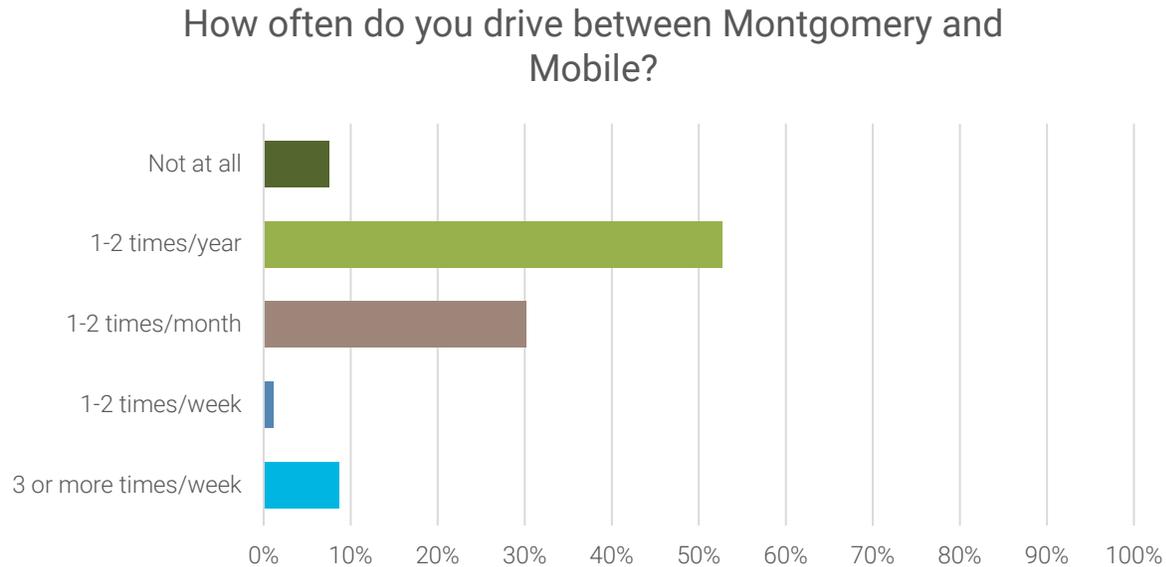
- (Open response question)

2.5.2 Public Survey Responses

In total, 95 people responded to the survey between October 17, 2018 and June 17, 2019. A summary of the results is presented below. Survey respondents were given an opportunity to leave free-response comments after completing the survey. The full text of these responses, along with the specific responses to the "Other" option for questions 13 and 14, are included in **Appendix A**.

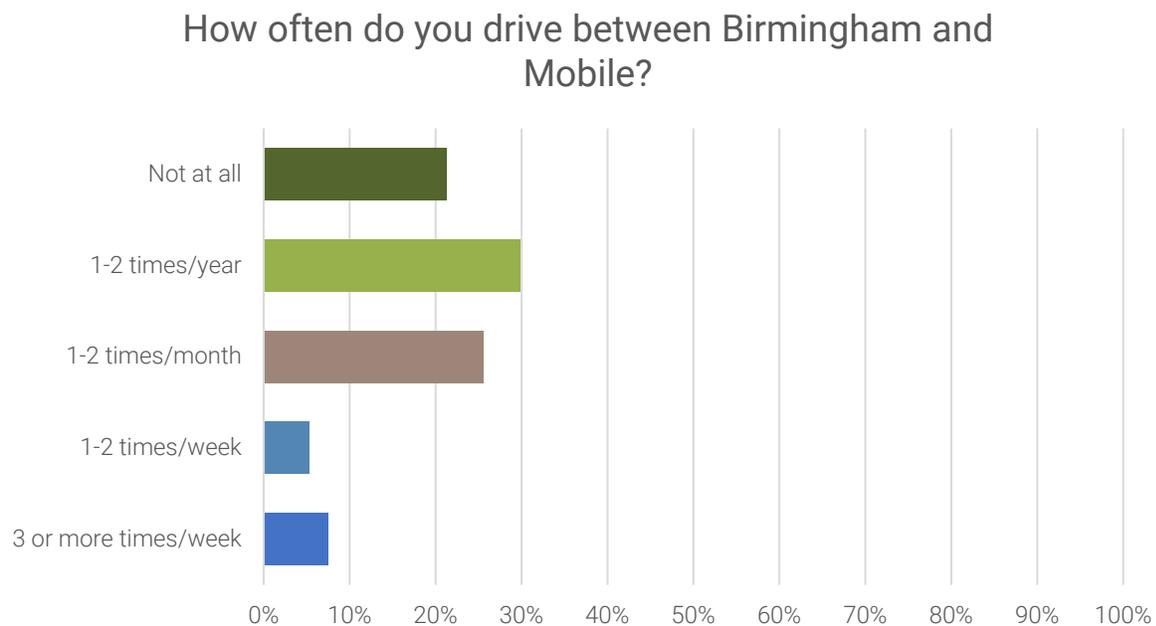


Figure 2: Public Survey Question #1



In total, the vast majority of people surveyed reported traveling between the cities of Montgomery and Mobile at least once annually (95 percent). More specifically, eight percent reported making the trip three or more times each week, one percent reported making the trip once or twice weekly, and 30 percent reported making the trip once or twice monthly. The highest group of respondents (53 percent) reported making the trip once or twice annually.

Figure 3: Public Survey Question #2



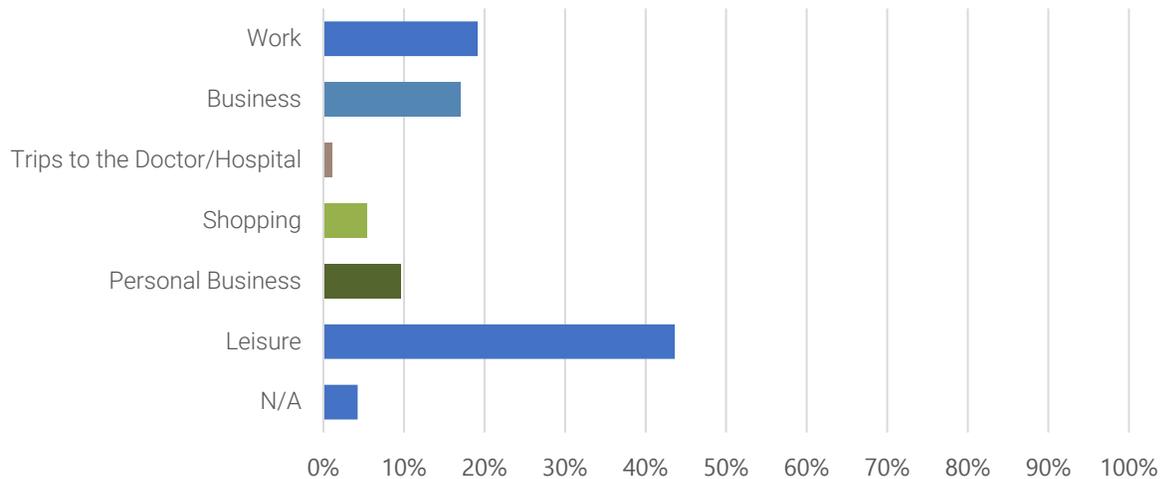
The survey found fewer people traveling between Birmingham and Mobile; 21 percent reported never making the trip. About 30 percent make the trip once or twice annually, 26 percent make the trip once or twice monthly,



and five percent make the trip once or twice per week. Seven percent of respondents said they make the trip three or more times weekly.

Figure 4: Public Survey Question #3

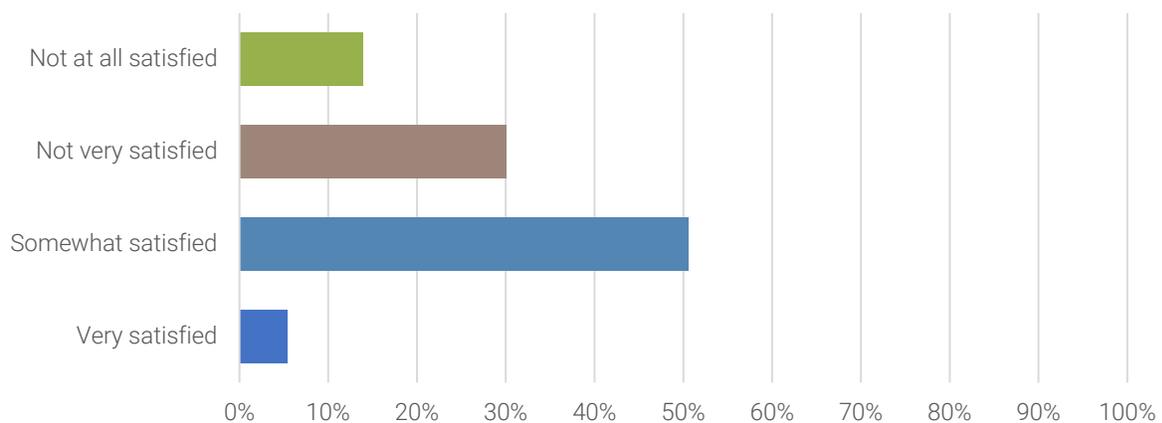
What is the main reason you visit Montgomery or Mobile?



When asked why respondents travel between the two cities, leisure was the most common response (44 percent). Work/commuting accounts for 19 percent of trips, business travel accounts for 17 percent, and personal business accounts for 10 percent of travel. Medical and shopping trips account for one and five percent, respectively.

Figure 5: Public Survey Question #4

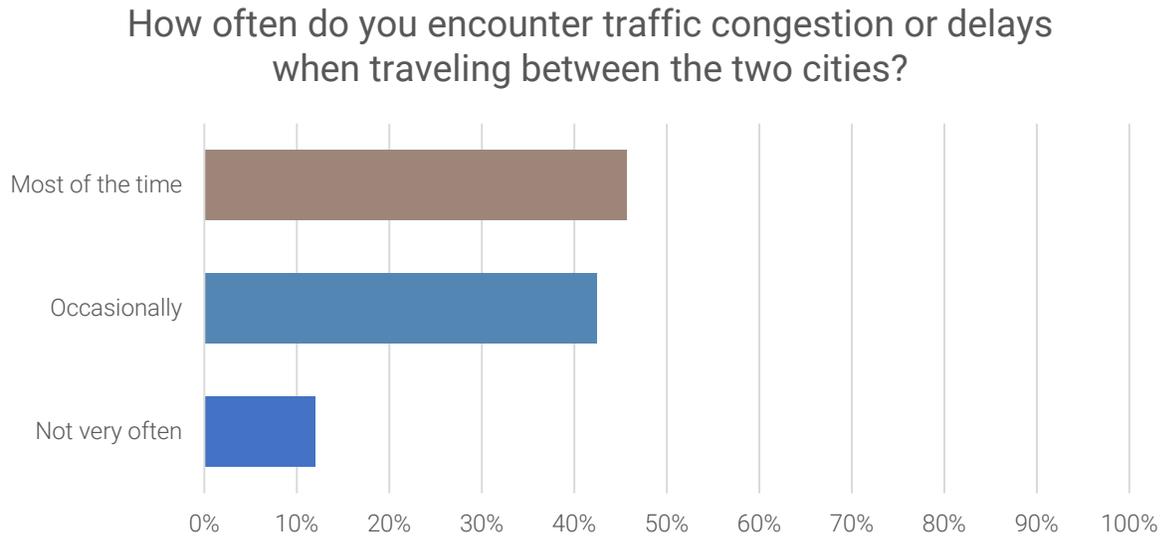
How satisfied are you with the current travel experience between the two cities?



When asked to rate their current travel experience, a majority of respondents reported being either “somewhat satisfied” (51 percent) or “very satisfied” (five percent). Additionally, 14 percent of respondents reported being “not at all satisfied” and 30 percent said they are “not very satisfied” with their current travel experience.

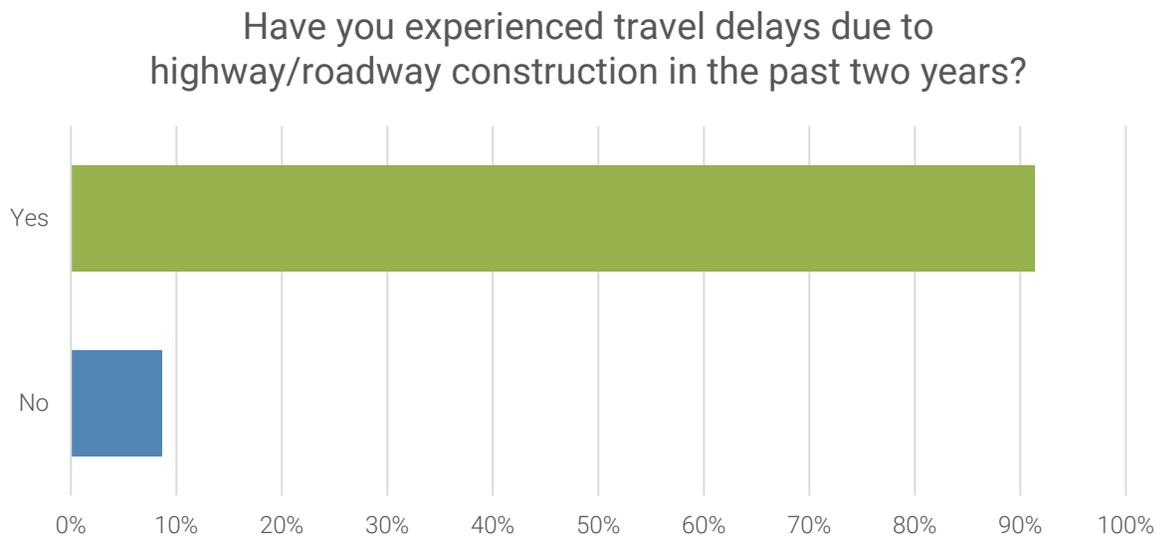


Figure 6: Public Survey Question #5



When respondents were asked how often they experience traffic delays when traveling between Mobile and Montgomery, 42 percent of respondents said they “occasionally” see delays, 46 percent said they experienced delays most of the time, and 12 percent indicated that they were not often delayed.

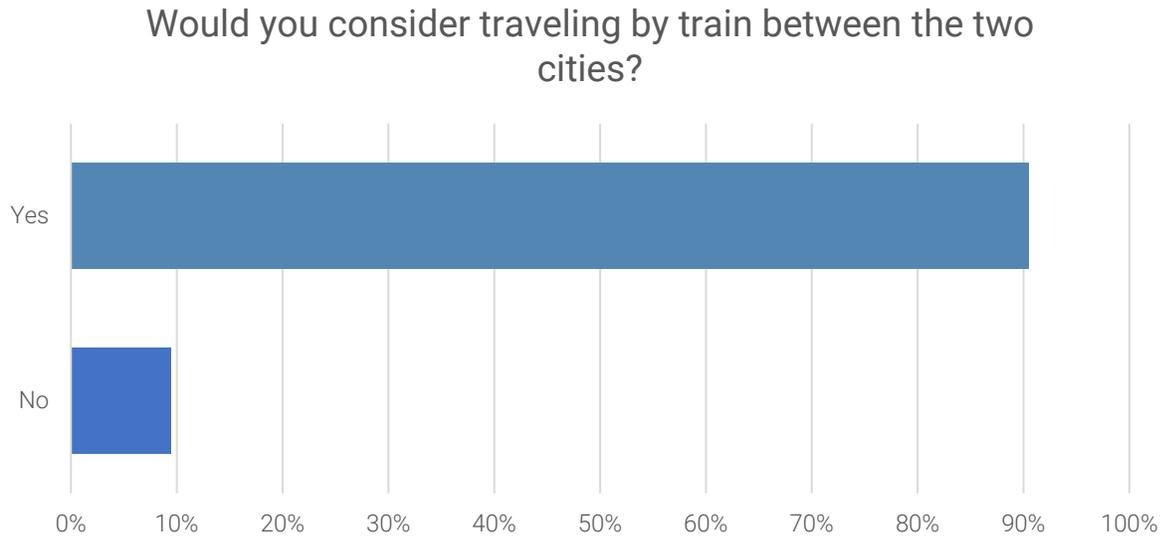
Figure 7: Public Survey Question #6



Respondents were also asked whether they had experienced delays due to highway construction. A large majority (91 percent) indicated that road work had slowed their travel between the two cities.

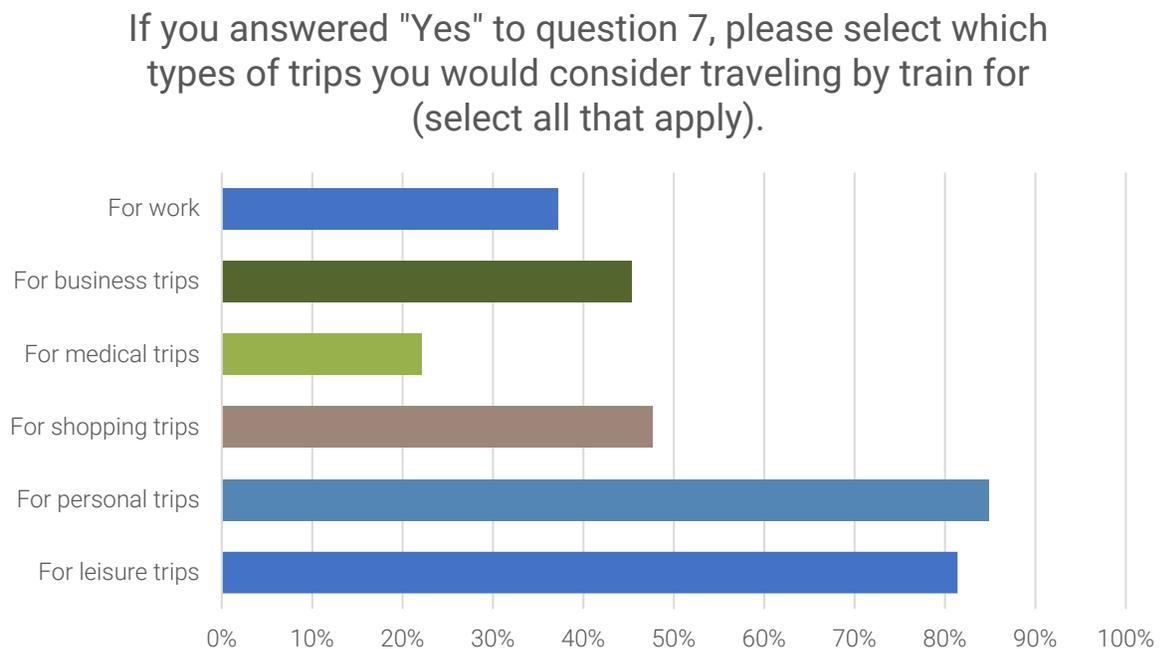


Figure 8: Public Survey Question #7



Survey takers were asked whether they would consider using intercity train service between Montgomery and Mobile. Generally, respondents were receptive to the idea, with 91 percent of respondents indicating that they would consider using rail travel. Nine percent of respondents replied in the negative.

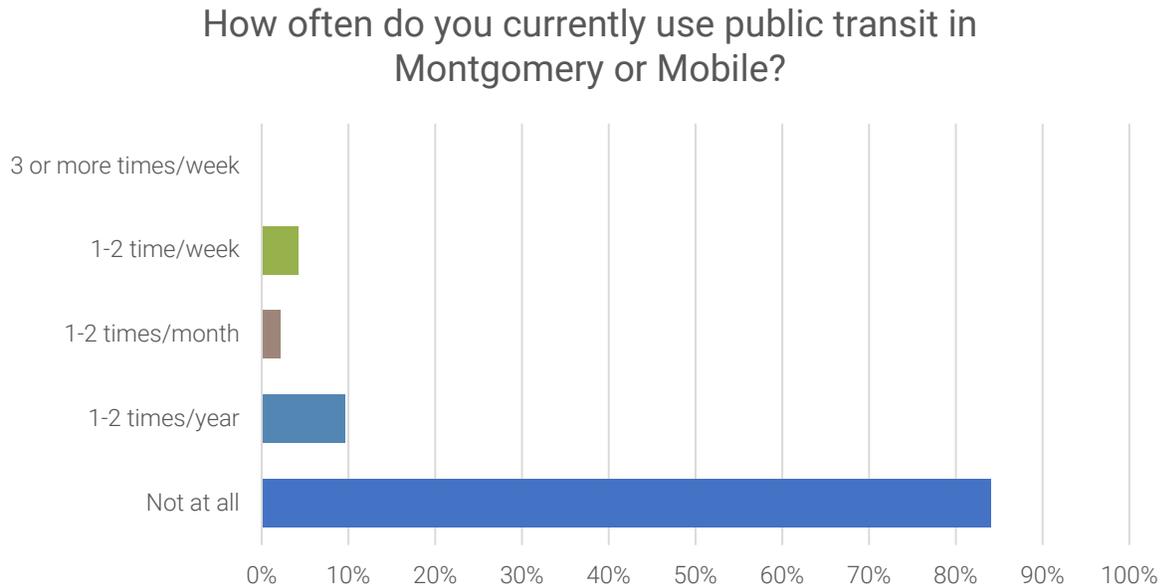
Figure 9: Public Survey Question #8



Respondents were also asked to select all the reasons they would travel by train. The most popular responses were for leisure trips (81 percent), for personal trips (85 percent), and for shopping trips (48 percent). Business trips were identified by 45 percent of respondents, and 37 percent said they would consider using rail transportation to get to their daily job. Rail travel for medical purposes was the least common response, with 22 percent selecting this trip type.

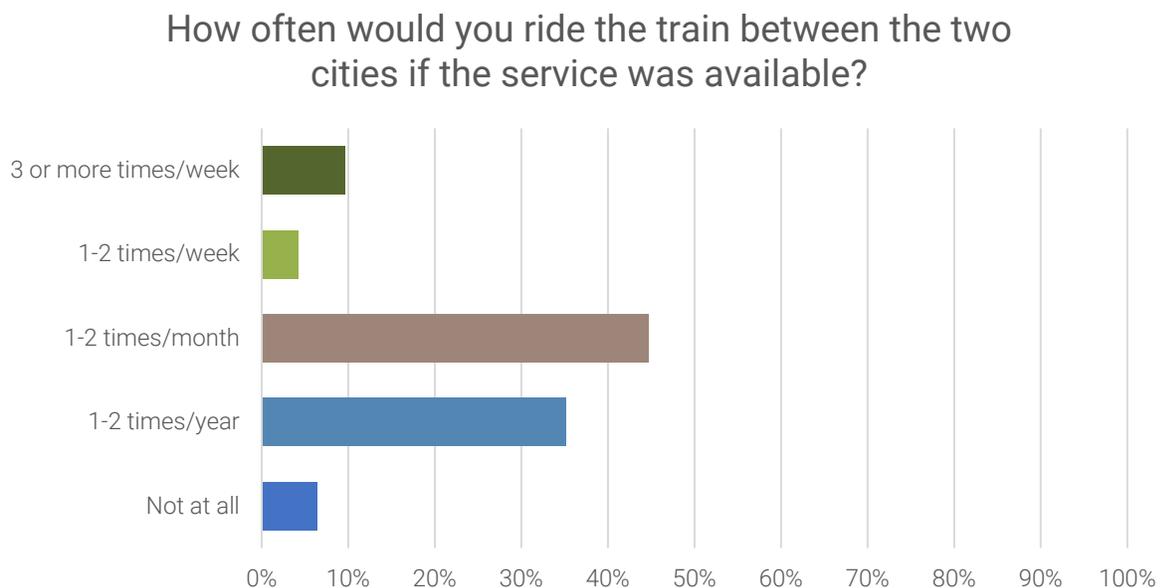


Figure 10: Public Survey Question #9



The survey asked how often respondents use public transit in Montgomery or Mobile. By a large margin, the most common response was “not at all” (84 percent). Ten percent said they use transit once or twice a year, two percent said they use transit once or twice a month, and four percent said they use it once or twice a week. No respondents use transit three or more times weekly.

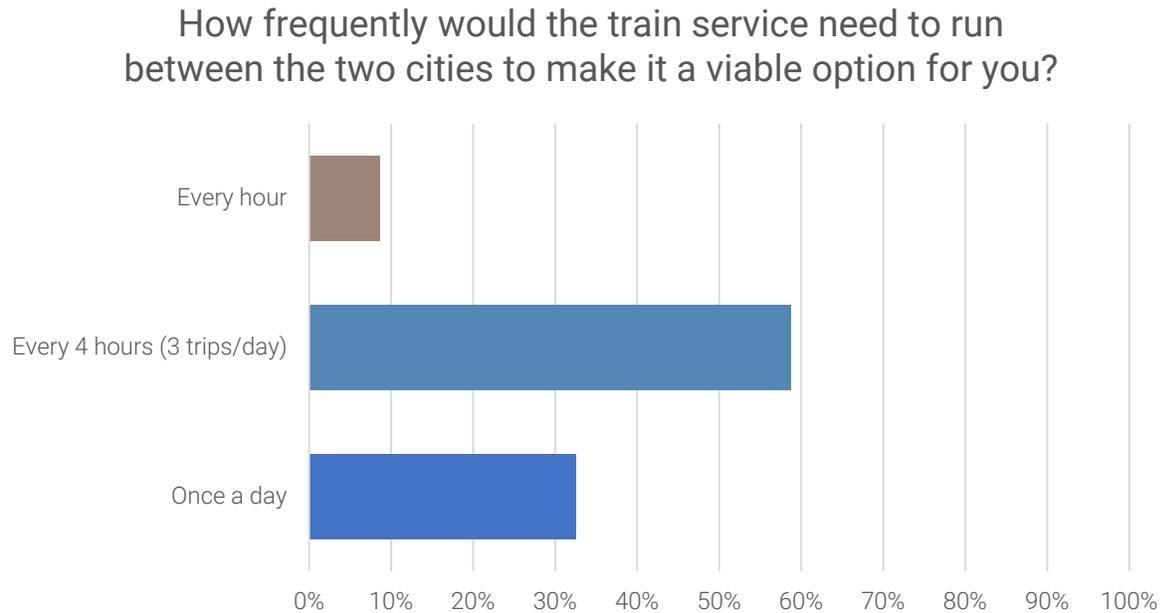
Figure 11: Public Survey Question #10



Respondents were also asked to indicate how often they would ride rail transportation between Montgomery and Mobile. The most common response was “1-2 times/month”, with 45 percent of respondents. 35 percent said they would ride one or two times each year. Ten percent said they would use such a service three or more times weekly and four percent would ride once or twice each week. Six percent of respondents said they would not use this service.

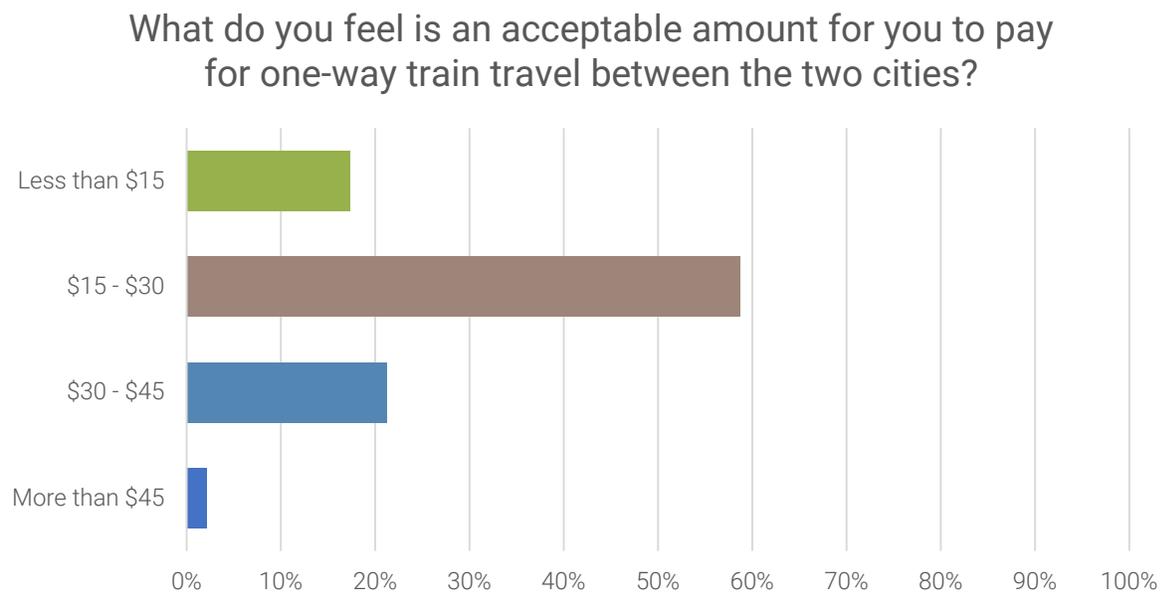


Figure 12: Public Survey Question #11



When asked how often trains would need to run each day to make the service an attractive alternative to driving, 59 percent said three daily trips, or every four hours during daytime hours. The second most common frequency selected was daily service at 33 percent, with hourly service being selected by nine percent of respondents.

Figure 13: Public Survey Question #12

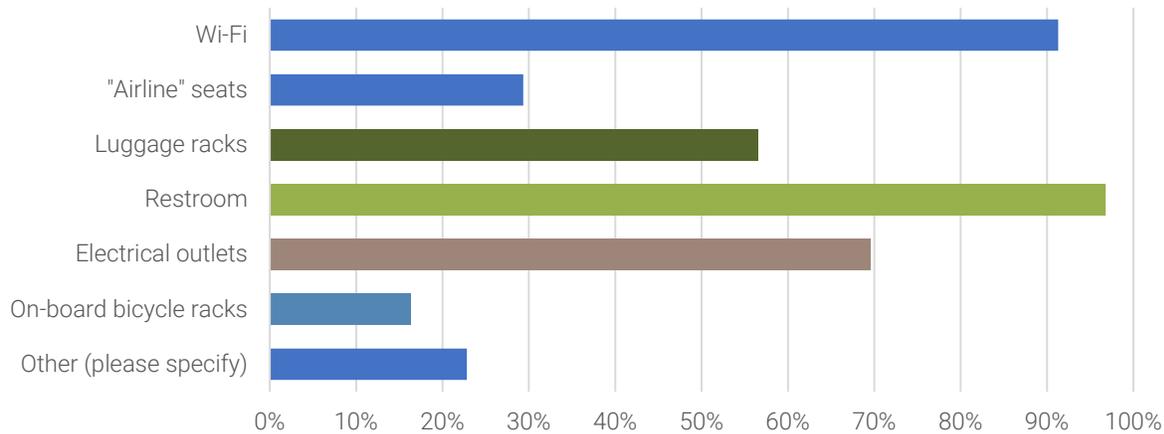


Respondents were also asked what they felt an acceptable price would be for a one-way ticket. Most respondents (59 percent) selected between \$15 and \$30, 21 percent would pay between \$30 and \$45, and two percent of respondents would pay more than \$45. For 18 percent of those surveyed, tickets would need to cost less than \$15 to be acceptable.



Figure 14: Public Survey Question #13

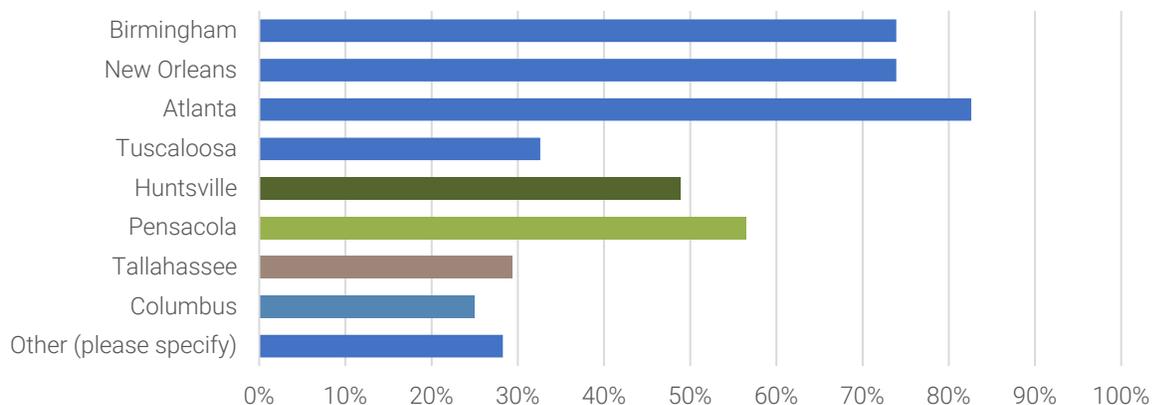
What types of amenities should be offered on board while riding the train? Please choose three.



Respondents were asked to select three amenities from a list that they would like to see offered by the service. Three responses—restrooms, Wi-Fi, and electrical outlets—were selected by more than fifty percent of respondents. The other responses, in order of popularity, were luggage racks, airline seats, and bicycle racks. A quarter of respondents selected “other”; 17 percent of survey respondents wrote-in that meals or refreshments should be available.

Figure 15: Public Survey Question #14

What other destinations would you be interested in traveling to by train? (Select all that apply.)



Survey respondents were asked to select which additional destinations they would be interested in traveling to by rail. The most popular destination was Atlanta, with 83 percent, followed by New Orleans and Birmingham (each with 74 percent), and Pensacola (57 percent). Other destinations include Huntsville (49 percent), Tuscaloosa (33 percent), Tallahassee (29 percent) and Columbus (25 percent). “Other” was selected by 25 percent of respondents, with Auburn/Opelika and Nashville, TN being suggested by five percent of poll respondents. Other answers included Cullman, Dothan, Muscle Shoals, and Gulf Shores. Chattanooga, TN, Memphis, TN, Savannah, GA and Biloxi, MS were other out-of-state destinations suggested.



3. Baseline Conditions

3.1 Study Corridor

The Phase II study corridor runs from downtown Montgomery to downtown Mobile. Two specific alignments are presented in the following study. The first alignment follows the freight rail corridor previous used by Amtrak's *Gulf Breeze* train from 1989 to 1995. This 181-mile route moves south from Montgomery through the cities of Greenville, Evergreen, Atmore, Brewton, and Bay Minette before crossing Mobile Bay and entering downtown Mobile. The second alignment runs within the median of Interstate 65 before crossing the Tensaw, Middle, and Mobile rivers and terminating in downtown Mobile, running for a total of 171 miles.

3.2 Railroad Characteristics

The existing freight railroad corridor between Montgomery and Mobile is owned by CSX Transportation (CSX). The corridor stretches approximately 181 miles between the two cities and connects the smaller communities of Greenville, Georgiana, Evergreen, Brewton, Flomaton, Atmore, and Bay Minette by rail. These communities grew early in their history around the railroad, and their downtown cores are still located next to or in close proximity to the CSX corridor. Traffic along the corridor consists of seven day trains and seven night trains for a total of 14 trains daily on average.

Four additional railroad lines intersect or connect along the corridor in Bay Minette, Atmore, Flomaton, and Georgiana. In Bay Minette, most of a spur that once connected south as far as Foley has been removed, and what remains serves local industries just south of the corridor in Bay Minette. In Atmore, another CSX-owned rail corridor intersects, connecting Monroeville and Demopolis to the north with Pensacola to the south. In Flomaton, a parallel north-south spur also connects Monroeville and Pensacola. Finally, in Georgiana, a rail spur connects southwest to Andalusia.

3.3 Highway Characteristics

3.3.1 Interstate 65

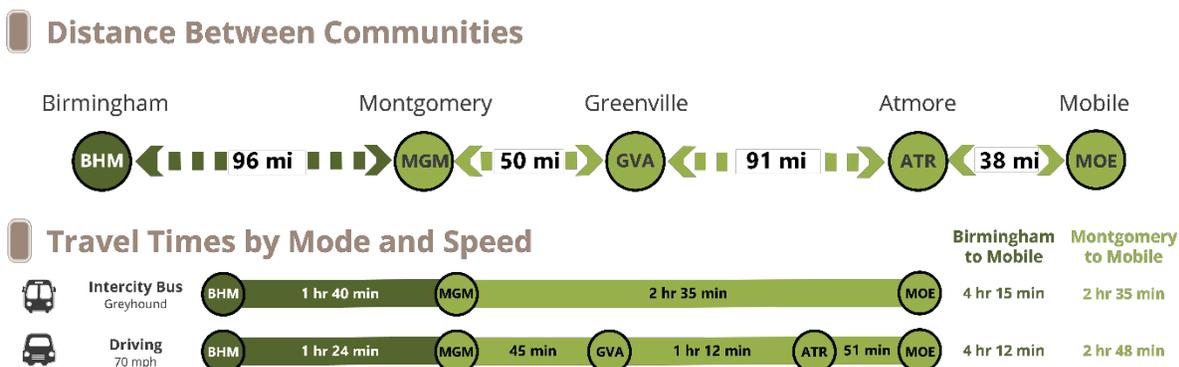
Interstate 65 serves as the major roadway connection between Mobile and Montgomery; the corridor also connects the smaller communities of Bay Minette, Atmore, Evergreen, Georgiana, and Greenville. Between Montgomery and Mobile, Interstate 65 is a four-lane divided expressway, widening to six lanes south of AL 158 / Industrial Highway in northern Mobile County. In Montgomery County, I-65 transitions from four lanes to eight north of US 80 / Selma Highway. In typical traffic conditions, driving from Montgomery to Mobile takes between 2 hours, 20 minutes and 2 hours, 40 minutes to cover this 169-mile corridor.

3.3.2 US 31

Prior to the construction of Interstate 65, US 31 served as Alabama's major north-south roadway. In the northern half of the study area, US 31 and Interstate 65 run nearly parallel to one another. South of Evergreen, US 31 cuts more sharply south, reaching the communities of Brewton and Flomaton before cutting back west to Atmore and Bay Minette. Continuing south from Bay Minette terminates at Spanish Fort, directly across Mobile Bay from downtown Mobile. Traveling between downtown Montgomery to downtown Mobile along this 190-mile corridor would take an estimated 3 hours, 50 minutes.



Figure 16: Distances and Times for Highway Travel



3.4 Transit Service

3.4.1 Intercity Transportation Services

Greyhound and Megabus provide intercity bus service between Montgomery and Mobile. For both services, the Montgomery Intermodal Center on Moulton Street serves as the Montgomery terminus. For Mobile, Megabus terminates at the Wave’s GM&O Transfer Center and Greyhound terminates at a dedicated Greyhound bus station at 2545 Government Boulevard, approximately 3.5 miles southwest of downtown Mobile. Depending on the time of day, Megabus gives a travel time between 3 hours, 20 minutes and 3 hours, 30 minutes. Greyhound trips have a listed travel time between 2 hours, 35 minutes and 2 hours, 50 minutes.

3.4.2 Montgomery Transit Service

In Montgomery, local public transit service is provided by the Montgomery Area Transit System, now branded as “the M”. Fourteen fixed routes provide service throughout the City of Montgomery, with nineteen buses operating in maximum service. Nine of these routes terminate at the Montgomery Intermodal Center in downtown Montgomery. This facility is located adjacent to the study corridor. The M also offers ADA compliant comparable paratransit through a telephone reservation system.



Buses run between 5:30 AM and 8:30 PM on weekdays. Most routes have one-hour headways, with the 2 – Eastdale Mall, 5 – McGehee Road, and 12 – Smiley Court/Gibbs Village operating with 30-minute headways. Saturday service has reduced hours with most routes running from 7:30 AM to 6:30 PM. Sunday service is not currently offered. According to the latest NTD data available (2017), the M provided 654,474 unlinked passenger bus trips, along with 28,725 paratransit trips.

3.4.3 Mobile Transit Service

The Wave Transit System services areas of Mobile County, providing bus service along twelve routes in the cities of Mobile and Pritchard. The Wave also offers the modal trolley service, a downtown circulator offering 20-minute headways and service to a number of attractions. The Wave Transit System also operates demand-response paratransit service.



All routes begin service at 6:00 AM, with most ending operation around 7:00 PM. Route 7 – Dauphin Street, Route 9 – Broad/Southside/Bel Air Mall, and Route 10 – Crosstown operate later into the evening, reaching their final stops around 10:00 PM. Current NTD (2017) data shows that the Wave provided 858,616 bus trips and 82,021 paratransit trips.

3.5 Demographics

3.5.1 Study Area Population Trends

Population density along the study corridor is greatest in the terminus communities of Montgomery and Mobile, where suburban development also extends across the bay into Baldwin County around Spanish Fort, Daphne, and Fairhope. The rest of the study area is almost entirely rural, with pockets of more dense development near the small towns of Bay Minette, Atmore, Evergreen, and Greenville.

The major metropolitan areas within the Phase II study corridor, Montgomery and Mobile, have been growing since 2000, and this trend is expected to continue. **Table 7** contains population data and projections for these cities and their surrounding metro areas through 2040.

Population projections for the study area counties show the urban counties in the study area – Baldwin, Montgomery, and Mobile – growing through 2040. Butler, Conecuh, and Escambia, the rural counties within the study area, are projected to see their populations decline. These projections are given in **Table 8**.

Figure 17: Population Density within the Study Area



Table 7: Population Statistics and Projections for Terminus Communities

Metropolitan Statistical Area	2000	2010	2020	2030	2040
Montgomery	346,528	374,536	377,195	386,277	396,298
Mobile	399,843	412,992	416,420	423,249	431,909



Table 8: Population Statistics and Projections for Counties Along Alignment

Counties	2000	2010	2020	2030	2040
Montgomery	223,510	229,363	226,832	228,160	229,647
Butler	21,399	20,947	19,690	18,909	18,558
Conecuh	14,089	13,228	12,157	11,195	10,470
Escambia	38,440	38,319	37,284	36,421	35,804
Baldwin	140,415	182,265	222,554	261,777	300,899
Mobile	399,843	412,992	416,420	423,249	431,909

3.5.2 Environmental Justice Communities

Minority and low-income communities may face disproportionate health and environmental impacts from large projects such as roadway or railway construction. For brevity, these communities are commonly referred to as “Environmental Justice (EJ) communities”. Ensuring that a project does not have disproportionately high impact on these communities is a priority in any Federally funded program.

Census tracts with a high percentage of minority, low-income, or both are found in every county within the study area. In Montgomery and Mobile counties, the largest concentrations of these communities are located in or around the downtown areas, near the proposed station locations. Census tracts in the rural counties also have a number of EJ communities. However, the large geographic area of rural census tracts makes it difficult to pinpoint the location of relevant communities; more specific methods will be required as the project progresses.

The map in Figure 18 shows the location of Census tracts within the study area with a large percentage of EJ populations.

Figure 18: Environmental Justice Communities



3.5.3 Employment Trends

The cities of Montgomery and Mobile serve as major employment centers for central and southern Alabama, respectively. Job growth in Montgomery was flat between 2018 and 2019, with an unemployment rate around 3.3 percent, slightly below the state average. Mobile saw growth of approximately 1,000 jobs during this time period, with an unemployment rate of 4.2 percent, less than one percent above the state average.



Table 9: Employment Trends in Terminus Communities

Metropolitan Statistical Area	June 2019	June 2018	Change	Unemployment Rate
Montgomery	179,800	179,800	0	3.3%
Mobile	188,500	187,500	+1,000	4.2%
Statewide	2,088,200	2,050,900	+37,300	3.5%

Source: Bureau of Labor Statistics

Montgomery’s three largest employers are government entities: the US military, the State government, and the public school system. Baptist Health, a private hospital and healthcare system, is the fourth largest employer. The fifth largest employer is Hyundai Motor Manufacturing, which builds cars at a facility south of downtown Montgomery.

Table 10: Largest Employers in Montgomery, Alabama

Largest Employers	Employees	Category
Maxwell Gunter Air Force Base	12,280	Military
State of Alabama	11,639	Government
Montgomery Public Schools	4,524	Public Education
Baptist Health	4,300	Healthcare
Hyundai Motor Manufacturing Alabama	3,100	Automobile Manufacturing

Source: Montgomery Area Chamber of Commerce

Mobile’s largest employer is the public school system. The University of South Alabama and associated medical facilities is second, with another healthcare employer, Infirmiry Health Systems, providing the third most jobs. Austal USA, a manufacturer of littoral combat ships for the US Navy, is fourth and the city government, employing 2,140 people, is the fifth-largest employer in Mobile.

Table 11: Largest Employers in Mobile, Alabama

Largest Employers	Employees	Category
Mobile County Public Schools	7,500	Public Education
University of South Alabama & Medical Facilities	6,000	Education/Healthcare
Infirmiry Health System	5,750	Healthcare
Austal USA	4,000	Shipbuilding
City of Mobile	2,140	Government

Source: Mobile Area Chamber of Commerce



4. Alternatives Development

4.1 Development of Alternatives

The existing freight railroad corridor between Montgomery and Mobile is owned by CSX Transportation (CSX) and is an extension of the same railroad corridor that was considered between Birmingham and Montgomery in Alternatives 1, 2, and 3 of the Phase I study. All passenger rail alternatives identified in this study are assumed to begin and end along the CSX corridor. At the northern extent in Montgomery, a proposed station at Milepost (MP) 488.13 would be located adjacent to the Montgomery Visitors Center, connecting to the southern terminus of the Phase I study alternatives. At the southern extent in Mobile, a proposed station at MP 666.50 would be located adjacent to the Mobile Convention Center in downtown Mobile.

An additional length south of downtown Mobile to MP 669.40 was also analyzed for connection to a potential Vehicle Storage and Maintenance Facility (VSMF) for passenger rail vehicles. Collectively, the length of the CSX corridor between Montgomery and Mobile is 181.13 miles. Approximately 95 percent of the CSX corridor between Montgomery and Mobile consists of a single main track with occasional passing sidings of varying lengths. It expands to two tracks in its approaches to Downtown Montgomery and Mobile, each segment between four and five miles in length. One major rail yard at Mobile and four major railroad junctions in Mobile, Atmore, Flomaton, and Montgomery lie along the CSX corridor.

Corridor alternatives in this study were developed based on the analysis of data from publicly available sources and on input from stakeholders and ADECA staff. The development of alternatives was also informed in part by those developed in the Phase I study between Birmingham and Montgomery. Utilizing all of these combined resources, the project team developed the following three (3) passenger rail corridor alternatives between Montgomery and Mobile:

- **Alternative 1:** Restoration of *Gulf Breeze* Amtrak Service in CSX Corridor (Average Speed: 48 mph)
- **Alternative 2:** Enhanced Service in CSX Corridor (Average Speed: 70 mph)
- **Alternative 3:** New Higher-Speed Service in I-65 Corridor (Average Speed: 101 mph)

See **Figure 19** below for a map of each alternative.



Figure 19: Corridor Alternatives



Each of the three alternatives outlined above pertain to the physical corridor in which they run and to capital investments that are required to implement them but not to scheduling or operating characteristics such as trips per day. Alternatives 1 and 2 assume shared-use tracks in the CSX corridor (i.e. passenger trains would operate along the same tracks as freight trains), whereas Alternative 3 assumes exclusive-use tracks for passenger trains only. Operationally, three sub-alternatives for each were considered:

- **Alternative 1:** Restoration of *Gulf Breeze* Amtrak Service in CSX Corridor (Average Speed: 48 mph)
 - **Alternative 1a:** One roundtrip per day
 - **Alternative 1b:** Three roundtrips per day
 - **Alternative 1c:** Six roundtrips per day
- **Alternative 2:** Enhanced Service in CSX Corridor (Average Speed: 70 mph)
 - **Alternative 2a:** One roundtrip per day
 - **Alternative 2b:** Three roundtrips per day
 - **Alternative 2c:** Six roundtrips per day
- **Alternative 3:** New Higher-Speed Service in I-65 Corridor (Average Speed: 101 mph)
 - **Alternative 3a:** One roundtrip per day
 - **Alternative 3b:** Three roundtrips per day
 - **Alternative 3c:** Six roundtrips per day

Characteristics and estimates for all Alternatives will be analyzed in Sections 5 and 6 of this report.

4.2 Potential Station Locations

For the purposes of this study, three potential station locations were identified based on evaluation measures including population, employment, and stakeholder feedback. Two of those station locations were the termini of the study corridor: downtown Montgomery and downtown Mobile. The third station location was the City of Atmore, the largest city intermediate of the two termini. An additional station location in the City of Greenville was later added for analysis, as it is the second-largest city between Montgomery and Mobile and potentially captures demand in the predominately rural communities between Montgomery and Atmore. Each station is discussed in more detail in the following sections. **Figure 20** below shows the four potential station locations along each corridor.



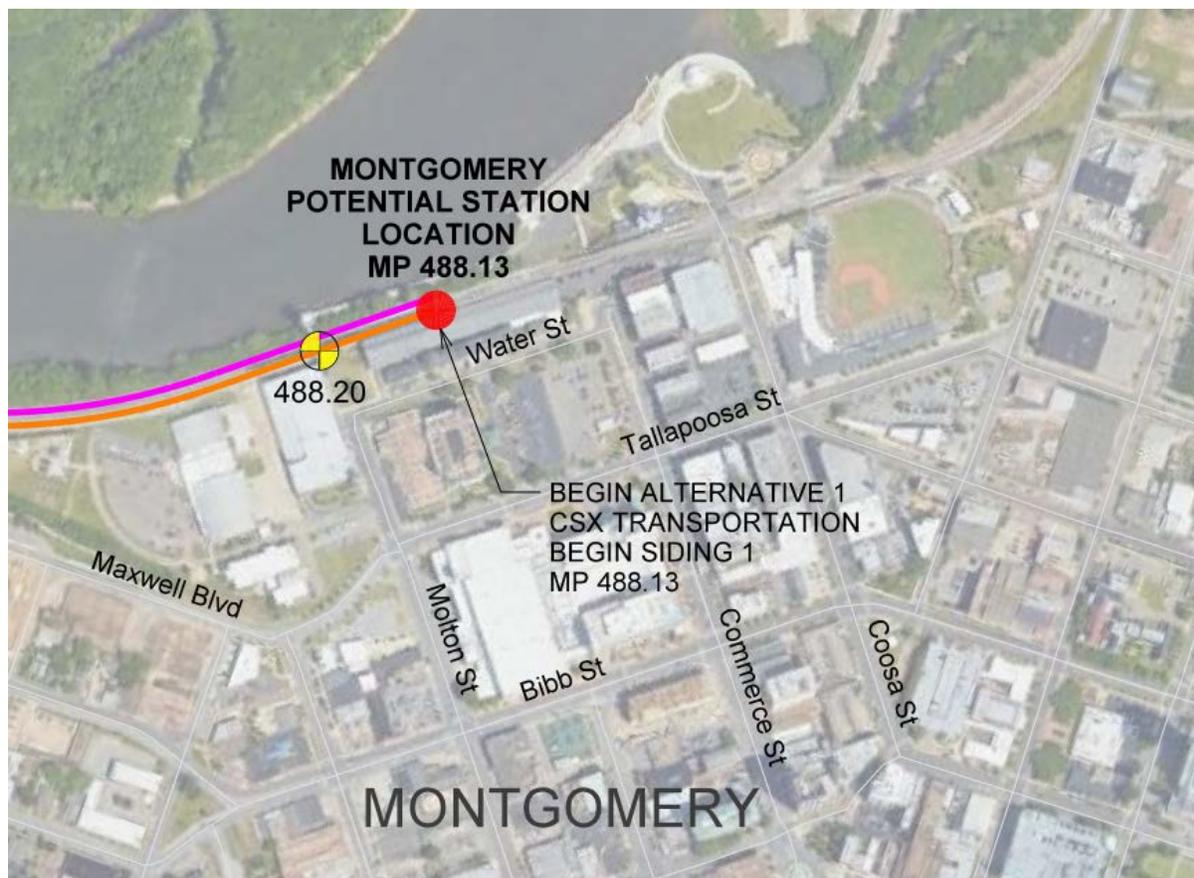
Figure 20: Corridor Alternatives with Proposed Stations



4.2.1 Proposed Montgomery Station

The proposed passenger rail station in downtown Montgomery remains in the same location as was proposed in the Phase I report. Placed adjacent to the Alabama River, Riverfront Park, Riverwalk Stadium, and historic Montgomery Union Station, the station is within walking distance of many nearby businesses, restaurants, and attractions. In addition, the Montgomery Intermodal Center is conveniently located with 500 feet of the station, connecting passengers directly to local transit services and intercity bus services. All Alternatives 1 through 3 are assumed to use this same station facility, as Alternative 3 (I-65 Corridor) would converge into the CSX corridor ahead of Montgomery station. **Figure 21** contains a map of the proposed Montgomery station.

Figure 21: Proposed Montgomery Station Location (Alternatives 1, 2, and 3)



4.2.2 Proposed Greenville Station

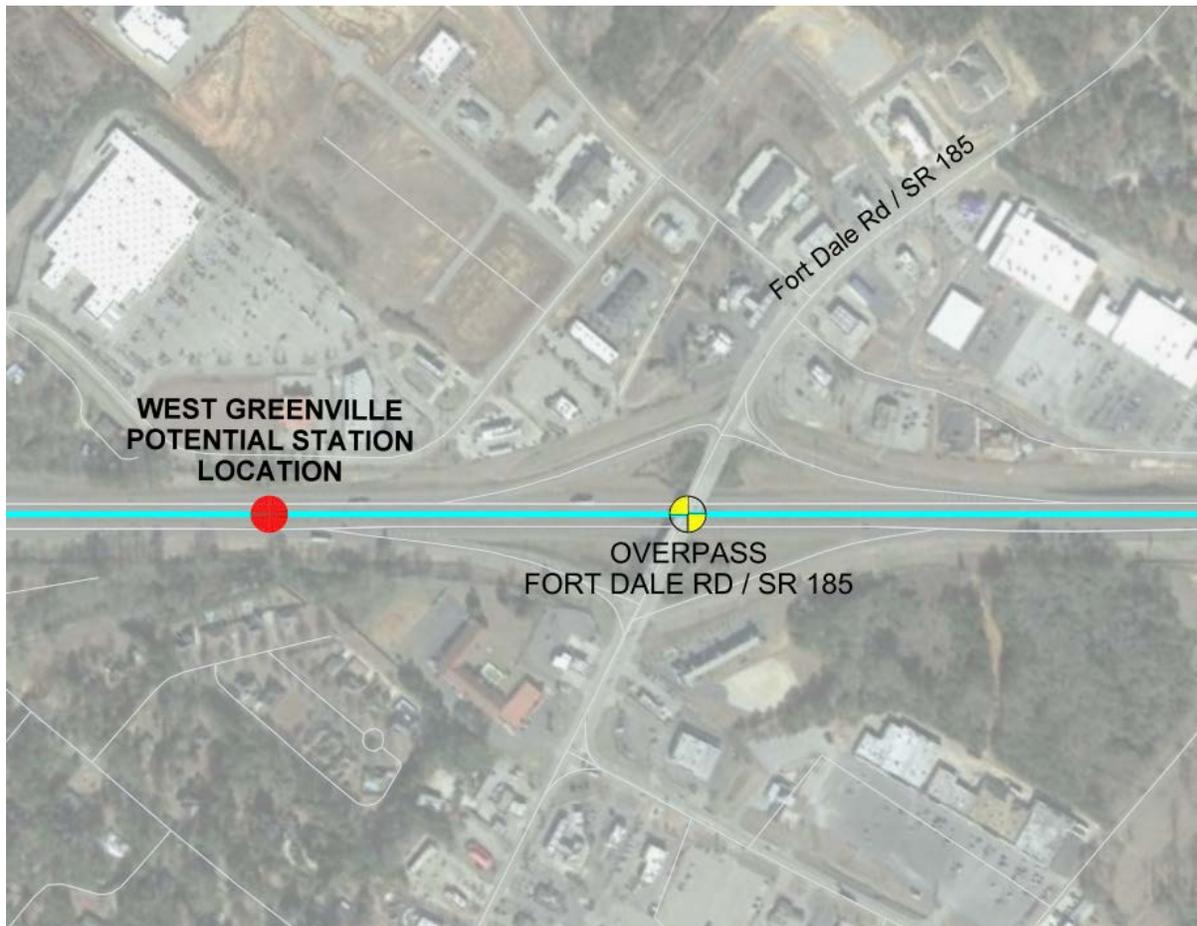
Downtown Greenville was home to a passenger rail stop along Amtrak's *Gulf Breeze* service at a historic passenger rail depot at the intersection of West Commerce Street and Bolling Street. This depot has since been repurposed as offices for the Greenville Chamber of Commerce. In Alternatives 1 and 2 following the CSX corridor, the proposed Greenville station would be located adjacent to this depot, within walking distance to the shops and restaurants of downtown Greenville. A parking facility for passengers and a new passenger rail building facility with a waiting area, ticketing booths, and restrooms could potentially be located just south of the historic depot along Bolling Street, with new platforms just outside to accommodate passenger trains. **Figure 22** contains a map of the proposed Greenville station in Alternatives 1 and 2.

Figure 22: Proposed Greenville Station Location (Alternatives 1 and 2)



Alternative 3, however, follows the I-65 corridor through Greenville, two miles northwest of downtown, negating the proposed Greenville station near downtown. In this alternative, the proposed West Greenville station would take its place. The proposed station would be located in close proximity to the interstate-side restaurants and businesses along State Route (SR) 185 at Exit 130. The track and platform area would likely be located in the median of I-65, with a pedestrian overpass connecting to a new passenger rail building facility on the north side of the Interstate. **Figure 23** contains a map of the proposed West Greenville station in Alternative 3.

Figure 23: Proposed West Greenville Station Location (Alternative 3)

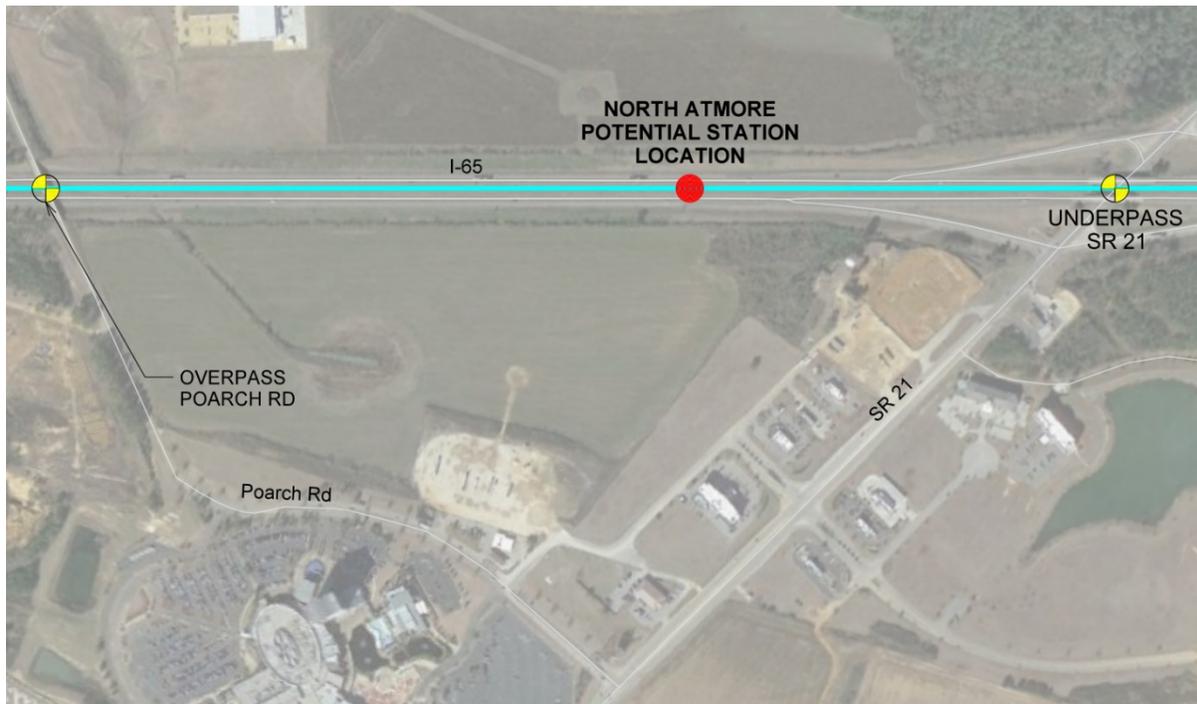


4.2.3 Proposed Atmore Station

Downtown Atmore was also home to a passenger rail stop along Amtrak's *Gulf Breeze*. Located between US Highway 31 and Louisville Avenue, the proposed downtown Atmore station would restore this stop to serve the Atmore community in Alternatives 1 and 2 following the CSX corridor. The proposed station would drop passengers in the heart of Atmore, within walking distance of its shops, restaurants, and cultural offerings. Adjacent to the proposed station, an existing parking facility would provide parking for approximately 32 vehicles. Potential upgrades to the existing stop include replacement of the existing platform decking, expansion, and/or beautification of parking facility, and construction of a new passenger rail building facility similar to the one mentioned for the proposed Greenville station. **Figure 24** contains a map of the proposed downtown Atmore station in Alternatives 1 and 2.



Figure 25: Proposed North Atmore Station Location (Alternative 3)



4.2.4 Proposed Mobile Station

The proposed passenger rail station in downtown Mobile would be located at or within close proximity to the intersection of Water Street and Government Street along the existing CSX corridor. Placed adjacent to Mobile Convention Center, Cooper Riverside Park, History Museum of Mobile, Gulf Coast Exploreum Science Center, Gulf Quest National Maritime Museum, and Dauphin Street, the station is within walking distance of many nearby businesses, restaurants, and attractions in downtown Mobile. A variety of intermodal connections are conveniently located close to the proposed station. The Mobile Cruise Terminal is approximately one quarter mile away, while local transit services and some intercity bus services operate out of The Wave Transit Center, less than one mile away. The Wave's Moda! Trolley service operates as a circulator throughout downtown Mobile, running every twenty minutes. This service connects passengers directly to the cruise terminal, transit center, and most other attractions throughout downtown Mobile. **Figure 26** contains a map of the proposed Mobile station.

Figure 26: Proposed Mobile Station Location (Alternatives 1, 2, and 3)



Like the proposed Montgomery station, all alternatives are assumed to use this same station facility in Mobile, as Alternative 3 (I-65 corridor) would converge into the CSX corridor ahead of Mobile station. The proposed station would also be shared with Amtrak's *Sunset Limited* service between Mobile and New Orleans, also along the CSX corridor, when and if that service becomes operational.

4.2.5 Other Potential Station Locations

Four previously mentioned stations in Montgomery, Greenville, Atmore, and Mobile were analyzed for the purposes of this feasibility study. However, a number of other communities may be evaluated in more advanced phases of planning with community support. These include but are not limited to the cities of Evergreen, Brewton, and Bay Minette. These communities, each with populations between 4,000 to 9,000, were served previously by Amtrak's *Gulf Breeze* service. The CSX corridor (Alternatives 1 and 2) currently runs through the downtown areas of all these communities, while the I-65 corridor (Alternative 3) lies in close proximity to Evergreen and Bay Minette. These communities may be engaged and analyzed for other potential station locations as planning for the Birmingham-Montgomery-Mobile passenger rail corridor advances.

4.3 Preliminary Service Schedule

The following preliminary service schedules are shown for all three corridor alternatives and were further subdivided into nine service scenarios as discussed in Section 4.1 of this report. Average speeds along the CSX corridor were calculated using existing maximum speeds gathered from the Highway-Rail Crossing Inventory of



the Federal Railroad Administration (FRA) Office of Safety Analysis. Any speed improvements proposed along the corridor were also taken into account. They were then multiplied by a factor of 0.95 to account for deceleration, acceleration, and stop times at the four proposed station locations. Those speeds were then used to determine an approximate schedule of service. Note that while this Phase II report evaluates rail service between Montgomery and Mobile, all schedules also include service from the Phase I report between Birmingham and Montgomery.

In more advanced phases of study, coordination with CSX Transportation and Amtrak are recommended to refine and finalize this schedule. In consultation with CSX, a comprehensive operations analysis using Rail Traffic Controller (RTC) software must be completed to determine an exact schedule considering both freight and passenger rail that would operate along the same corridor. In consultation with Amtrak, the schedule should be further refined to compliment Amtrak's existing *Crescent* service in Birmingham and potential resumption of *Sunset Limited* service in Mobile.

4.3.1 Alternative 1

As mentioned previously, Alternative 1 would restore Amtrak's *Gulf Breeze* service along shared-use tracks in the CSX corridor between downtown Montgomery (MGM) and downtown Mobile (MOB) with intermediate stops in the cities of Greenville (GVA) and Atmore (ATR). It would operate at an average speed of 48 miles per hour, resulting in travel times between Montgomery and Mobile of 3 hours, 44 minutes and between Birmingham and Mobile of 5 hours, 44 minutes. As this is a restoration of previous service, no track or speed improvements are proposed.

4.3.1.1 Alternative 1a

In Alternative 1a, passenger rail service operates with a frequency of one roundtrip per day. One southbound train departs Birmingham at 10:00 AM, arriving in Montgomery at 12:00 PM and in Mobile at 3:44 PM. Meanwhile, one northbound train departs Mobile at 8:45 AM, arriving in Montgomery at 12:29 PM and in Birmingham at 2:29 PM. The preliminary service schedule for Alternative 1a is shown in **Table 12** below.

Table 12: Alternative 1a Intercity Train Schedule

Station		Departure and Arrival Time	Travel Time (from previous)	Travel Time (from start)
Trip:		1		
Southbound	BHM	10:00 AM	-	-
	MGM	12:00 PM	2:00:00	2:00:00
	GVA	1:02 PM	1:02:00	3:02:00
	ATR	2:56 PM	1:54:00	4:56:00
	MOB	3:44 PM	0:48:00	5:44:00
Northbound	MOB	8:45 AM	-	-
	ATR	9:33 AM	0:48:00	0:48:00
	GVA	11:27 AM	1:54:00	2:42:00
	MGM	12:29 PM	1:02:00	3:44:00
	BHM	2:29 PM	2:00:00	5:44:00



4.3.1.2 Alternative 1b

In Alternative 1b, passenger rail service operates with a frequency of three roundtrips per day. The first southbound train departs Birmingham at 8:00 AM, arriving in Montgomery at 10:00 AM and in Mobile at 1:44 PM. Meanwhile, the first northbound train departs Mobile at 6:45 AM, arriving in Montgomery at 10:29 AM and in Birmingham at 12:29 PM. Two additional trips occur in each direction daily, each with a headway of four hours. The preliminary service schedule for Alternative 1b is shown in **Table 13** below.

Table 13: Alternative 1b Intercity Train Schedule

Station		Departure and Arrival Time			Travel Time (from previous)	Travel Time (from start)
		Trip: 1	2	3		
Southbound	BHM	8:00 AM	12:00 PM	4:00 PM	-	-
	MGM	10:00 AM	2:00 PM	6:00 PM	2:00:00	2:00:00
	GVA	11:02 AM	3:02 PM	7:02 PM	1:02:00	3:02:00
	ATR	12:56 PM	4:56 PM	8:56 PM	1:54:00	4:56:00
	MOB	1:44 PM	5:44 PM	9:44 PM	0:48:00	5:44:00
Northbound	MOB	6:45 AM	10:45 AM	2:45 PM	-	-
	ATR	7:33 AM	11:33 AM	3:33 PM	0:48:00	0:48:00
	GVA	9:27 AM	1:27 PM	5:27 PM	1:54:00	2:42:00
	MGM	10:29 AM	2:29 PM	6:29 PM	1:02:00	3:44:00
	BHM	12:29 PM	4:29 PM	8:29 PM	2:00:00	5:44:00

4.3.1.3 Alternative 1c

In Alternative 1c, passenger rail service operates with a frequency of six roundtrips per day. The first southbound train departs Birmingham at 8:00 AM, arriving in Montgomery at 10:00 AM and in Mobile at 1:44 PM. Meanwhile, the first northbound train departs Mobile at 6:45 AM, arriving in Montgomery at 10:29 AM and in Birmingham at 12:29 PM. Five additional trips occur in each direction daily, each with a headway of two hours. The preliminary service schedule for Alternative 1c is shown in **Table 14** below.



Table 14: Alternative 1c Intercity Train Schedule

Station		Departure and Arrival Time						Travel Time (from previous)	Travel Time (from start)
		Trip:	1	2	3	4	5		
Southbound	BHM	8:00 AM	10:00 AM	12:00 PM	2:00 PM	4:00 PM	6:00 PM	-	-
	MGM	10:00 AM	12:00 PM	2:00 PM	4:00 PM	6:00 PM	8:00 PM	2:00:00	2:00:00
	GVA	11:02 AM	1:02 PM	3:02 PM	5:02 PM	7:02 PM	9:02 PM	1:02:00	3:02:00
	ATR	12:56 PM	2:56 PM	4:56 PM	6:56 PM	8:56 PM	10:56 PM	1:54:00	4:56:00
	MOB	1:44 PM	3:44 PM	5:44 PM	7:44 PM	9:44 PM	11:44 PM	0:48:00	5:44:00
Northbound	MOB	6:45 AM	8:45 AM	10:45 AM	12:45 PM	2:45 PM	4:45 PM	-	-
	ATR	7:33 AM	9:33 AM	11:33 AM	1:33 PM	3:33 PM	5:33 PM	0:48:00	0:48:00
	GVA	9:27 AM	11:27 AM	1:27 PM	3:27 PM	5:27 PM	7:27 PM	1:54:00	2:42:00
	MGM	10:29 AM	12:29 PM	2:29 PM	4:29 PM	6:29 PM	8:29 PM	1:02:00	3:44:00
	BHM	12:29 PM	2:29 PM	4:29 PM	6:29 PM	8:29 PM	10:29 PM	2:00:00	5:44:00

4.3.2 Alternative 2

Alternative 2 would provide significantly enhanced passenger rail service along shared-use tracks in the CSX corridor between downtown Montgomery and downtown Mobile with intermediate stops in the cities of Greenville and Atmore. It would operate at an average speed of 70 miles per hour, resulting in travel times between Montgomery and Mobile of 2 hours 34 minutes and between Birmingham and Mobile of 3 hours 56 minutes. Significant improvements to the existing tracks must be invested in to achieve this speed, notably curve flattening measures. Specific descriptions of all proposed improvements in Alternative 2 can be found in Section 4.4.

4.3.2.1 Alternative 2a

In Alternative 2a, passenger rail service operates with a frequency of one roundtrip per day. One southbound train departs Birmingham at 10:00 AM, arriving in Montgomery at 11:22 AM and in Mobile at 1:56 PM. Meanwhile, one northbound train departs Mobile at 10:00 AM, arriving in Montgomery at 12:34 PM and in Birmingham at 1:56 PM. The preliminary service schedule for Alternative 2a is shown in Table 15 below.



Table 15: Alternative 2a Intercity Train Schedule

Station		Departure and Arrival Time		Travel Time (from previous)	Travel Time (from start)
		1			
Southbound	BHM	10:00 AM		-	-
	MGM	11:22 AM		1:22:00	1:22:00
	GVA	12:05 PM		0:43:00	2:05:00
	ATR	1:23 PM		1:18:00	3:23:00
	MOB	1:56 PM		0:33:00	3:56:00
Northbound	MOB	10:00 AM		-	-
	ATR	10:33 AM		0:33:00	0:33:00
	GVA	11:51 AM		1:18:00	1:51:00
	MGM	12:34 PM		0:43:00	2:34:00
	BHM	1:56 PM		1:22:00	3:56:00

4.3.2.2 Alternative 2b

In Alternative 2b, passenger rail service operates with a frequency of three roundtrips per day. The first southbound train departs Birmingham at 8:00 AM, arriving in Montgomery at 9:22 AM and in Mobile at 11:56 AM. Meanwhile, the first northbound train departs Mobile at 7:00 AM, arriving in Montgomery at 9:34 AM and in Birmingham at 10:56 AM. Two additional trips occur in each direction daily, each with a headway of four hours. The preliminary service schedule for Alternative 2b is shown in Table 16 below.

Table 16: Alternative 2b Intercity Train Schedule

Station		Departure and Arrival Time			Travel Time (from previous)	Travel Time (from start)
		1	2	3		
Southbound	BHM	8:00 AM	12:00 PM	4:00 PM	-	-
	MGM	9:22 AM	1:22 PM	5:22 PM	1:22:00	1:22:00
	GVA	10:05 AM	2:05 PM	6:05 PM	0:43:00	2:05:00
	ATR	11:23 AM	3:23 PM	7:23 PM	1:18:00	3:23:00
	MOB	11:56 AM	3:56 PM	7:56 PM	0:33:00	3:56:00
Northbound	MOB	7:00 AM	11:00 AM	3:00 PM	-	-
	ATR	7:33 AM	11:33 AM	3:33 PM	0:33:00	0:33:00
	GVA	8:51 AM	12:51 PM	4:51 PM	1:18:00	1:51:00
	MGM	9:34 AM	1:34 PM	5:34 PM	0:43:00	2:34:00
	BHM	10:56 AM	2:56 PM	6:56 PM	1:22:00	3:56:00



4.3.2.3 Alternative 2c

In Alternative 2c, passenger rail service operates with a frequency of six roundtrips per day. The first southbound train departs Birmingham at 8:00 AM, arriving in Montgomery at 9:22 AM and in Mobile at 11:56 AM. Meanwhile, the first northbound train departs Mobile at 7:00 AM, arriving in Montgomery at 9:34 AM and in Birmingham at 10:56 AM. Five additional trips occur in each direction daily, each with a headway of two hours. The preliminary service schedule for Alternative 1c is shown in **Table 17** below.

Table 17: Alternative 2c Intercity Train Schedule

Station		Departure and Arrival Time						Travel Time (from previous)	Travel Time (from start)
		Trip: 1	2	3	4	5	6		
Southbound	BHM	8:00 AM	10:00 AM	12:00 PM	2:00 PM	4:00 PM	6:00 PM	-	-
	MGM	9:22 AM	11:22 AM	1:22 PM	3:22 PM	5:22 PM	7:22 PM	1:22:00	1:22:00
	GVA	10:05 AM	12:05 PM	2:05 PM	4:05 PM	6:05 PM	8:05 PM	0:43:00	2:05:00
	ATR	11:23 AM	1:23 PM	3:23 PM	5:23 PM	7:23 PM	9:23 PM	1:18:00	3:23:00
	MOB	11:56 AM	1:56 PM	3:56 PM	5:56 PM	7:56 PM	9:56 PM	0:33:00	3:56:00
Northbound	MOB	7:00 AM	9:00 AM	11:00 AM	1:00 PM	3:00 PM	5:00 PM	-	-
	ATR	7:33 AM	9:33 AM	11:33 AM	1:33 PM	3:33 PM	5:33 PM	0:33:00	0:33:00
	GVA	8:51 AM	10:51 AM	12:51 PM	2:51 PM	4:51 PM	6:51 PM	1:18:00	1:51:00
	MGM	9:34 AM	11:34 AM	1:34 PM	3:34 PM	5:34 PM	7:34 PM	0:43:00	2:34:00
	BHM	10:56 AM	12:56 PM	2:56 PM	4:56 PM	6:56 PM	8:56 PM	1:22:00	3:56:00

4.3.3 Alternative 3

Alternative 3 would provide new higher-speed passenger rail service on an exclusive-use track between downtown Montgomery and downtown Mobile. These tracks would be built within the median of Interstate 65, rejoining the CSX corridor only as it approaches the two termini. It would also serve two intermediate stops in the cities of Greenville and Atmore, though exact placement of these stops will vary from Alternatives 1 and 2 because service will run in a separate corridor.

The existing geometry of I-65 tends to have 42 percent fewer curves and four times greater average curve radii in comparison to the CSX corridor, allowing trains to operate at up to 110 miles per hour in most parts of the corridor and resulting in an average speed of 101 miles per hour. This speed allows for shorter travel times between Montgomery and Mobile of 1 hours, 46 minutes and between Birmingham and Mobile of 2 hours, 43 minutes. No rail infrastructure currently exists along the I-65 corridor, so all proposed track must be constructed new. Specific descriptions of all proposed improvements in Alternative 3 can be found in **Section 4.4**.

4.3.3.1 Alternative 3a

In Alternative 3a, passenger rail service operates with a frequency of one roundtrip per day. One southbound train departs Birmingham at 10:00 AM, arriving in Montgomery at 10:57 AM and in Mobile at 12:43 PM. Meanwhile, one northbound train departs Mobile at 10:00 AM, arriving in Montgomery at 11:46 AM and in Birmingham at 12:43 PM. The preliminary service schedule for Alternative 3a is shown in **Table 18** below.



Table 18: Alternative 3a Intercity Train Schedule

Station		Departure and Arrival Time	Travel Time (from previous)	Travel Time (from start)
Trip:		1		
Southbound	BHM	10:00 AM	-	-
	MGM	10:57 AM	0:57:00	0:57:00
	GVA	11:27 AM	0:30:00	1:27:00
	ATR	12:21 PM	0:54:00	2:21:00
	MOB	12:43 PM	0:22:00	2:43:00
Northbound	MOB	10:00 AM	-	-
	ATR	10:22 AM	0:22:00	0:22:00
	GVA	11:16 AM	0:54:00	1:16:00
	MGM	11:46 AM	0:30:00	1:46:00
	BHM	12:43 PM	0:57:00	2:43:00

4.3.3.2 Alternative 3b

In Alternative 3b, passenger rail service operates with a frequency of three roundtrips per day. The first southbound train departs Birmingham at 8:00 AM, arriving in Montgomery at 8:57 AM and in Mobile at 10:43 AM. Meanwhile, the first northbound train departs Mobile at 7:00 AM, arriving in Montgomery at 8:46 AM and in Birmingham at 9:43 AM. Two additional trips occur in each direction daily, each with a headway of four hours. The preliminary service schedule for Alternative 3b is shown in Table 19 below.

Table 19: Alternative 3b Intercity Train Schedule

Station		Departure and Arrival Time			Travel Time (from previous)	Travel Time (from start)
Trip:		1	2	3		
Southbound	BHM	8:00 AM	12:00 PM	4:00 PM	-	-
	MGM	8:57 AM	12:57 PM	4:57 PM	0:57:00	0:57:00
	GVA	9:27 AM	1:27 PM	5:27 PM	0:30:00	1:27:00
	ATR	10:21 AM	2:21 PM	6:21 PM	0:54:00	2:21:00
	MOB	10:43 AM	2:43 PM	6:43 PM	0:22:00	2:43:00
Northbound	MOB	7:00 AM	11:00 AM	3:00 PM	-	-
	ATR	7:22 AM	11:22 AM	3:22 PM	0:22:00	0:22:00
	GVA	8:16 AM	12:16 PM	4:16 PM	0:54:00	1:16:00
	MGM	8:46 AM	12:46 PM	4:46 PM	0:30:00	1:46:00
	BHM	9:43 AM	1:43 PM	5:43 PM	0:57:00	2:43:00



4.3.3.3 Alternative 3c

In Alternative 3c, passenger rail service operates with a frequency of six roundtrips per day. The first southbound train departs Birmingham at 8:00 AM, arriving in Montgomery at 8:57 AM and in Mobile at 10:43 AM. Meanwhile, the first northbound train departs Mobile at 7:00 AM, arriving in Montgomery at 8:46 AM and in Birmingham at 9:43 AM. Five additional trips occur in each direction daily, each with a headway of two hours. The preliminary service schedule for Alternative 3c is shown in **Table 20** below.

Table 20: Alternative 3c Intercity Train Schedule

Station		Departure and Arrival Time						Travel Time (from previous)	Travel Time (from start)
		Trip: 1	2	3	4	5	6		
Southbound	BHM	8:00 AM	10:00 AM	12:00 PM	2:00 PM	4:00 PM	6:00 PM	-	-
	MGM	8:57 AM	10:57 AM	12:57 PM	2:57 PM	4:57 PM	6:57 PM	0:57:00	0:57:00
	GVA	9:27 AM	11:27 AM	1:27 PM	3:27 PM	5:27 PM	7:27 PM	0:30:00	1:27:00
	ATR	10:21 AM	12:21 PM	2:21 PM	4:21 PM	6:21 PM	8:21 PM	0:54:00	2:21:00
	MOB	10:43 AM	12:43 PM	2:43 PM	4:43 PM	6:43 PM	8:43 PM	0:22:00	2:43:00
Northbound	MOB	7:00 AM	9:00 AM	11:00 AM	1:00 PM	3:00 PM	5:00 PM	-	-
	ATR	7:22 AM	9:22 AM	11:22 AM	1:22 PM	3:22 PM	5:22 PM	0:22:00	0:22:00
	GVA	8:16 AM	10:16 AM	12:16 PM	2:16 PM	4:16 PM	6:16 PM	0:54:00	1:16:00
	MGM	8:46 AM	10:46 AM	12:46 PM	2:46 PM	4:46 PM	6:46 PM	0:30:00	1:46:00
	BHM	9:43 AM	11:43 AM	1:43 PM	3:43 PM	5:43 PM	7:43 PM	0:57:00	2:43:00

4.3.4 Schedule Summary

In comparison driving or intercity bus services, passenger rail service could yield highly competitive travel times between Birmingham, Montgomery, and Mobile. Alternative 1 results in the slowest service, at 48 miles per hour on average, and yields a 36 percent higher travel time than driving. Alternative 2 results in a 7 percent lower travel time on average, while Alternative 3 results in a 36 percent lower travel time on average and is the most competitive of the three alternatives. Travel times for all modes are displayed in **Figure 27** below.

Figure 27: Travel Times for Highway and Rail Modes



4.4 Infrastructure Improvements

A wide range of potential infrastructure improvements were evaluated to better accommodate passenger rail service between Montgomery and Mobile. In the Phase I study, similar improvements were evaluated on the segment between Birmingham and Montgomery. Some improvements, like construction of stations or vehicle storage and maintenance facilities (VSMF), are consistent throughout Alternatives 1, 2, and 3. Other improvements, such as implementation of curve flattening measures and extension of sidings, vary between alternatives. All are discussed in further detail below.

4.4.1 Facility Improvements

Needs related to construction of stations and VSMF facilities are shared among all Alternatives 1, 2, and 3. Two distinct “tiers” of station facilities would be needed along the Montgomery-Mobile passenger rail corridor: terminus stations and intermediate stations. All are discussed in further detail below. Three potential VSMF facility locations have also been identified.

4.4.1.1 Terminus Stations

Terminus stations, aside from being physically located at the upper and lower termini of this study, serve the dense downtown cores of two major urbanized areas in the state: Montgomery and Mobile. Each terminus station is in close proximity to numerous offices, hotels, businesses, and attractions, and to major transportation hubs serving local transit intercity services. A terminus station example is the Birmingham Intermodal Terminal in Downtown Birmingham, shown in **Figure 28**.

Figure 28: Birmingham Intermodal Terminal

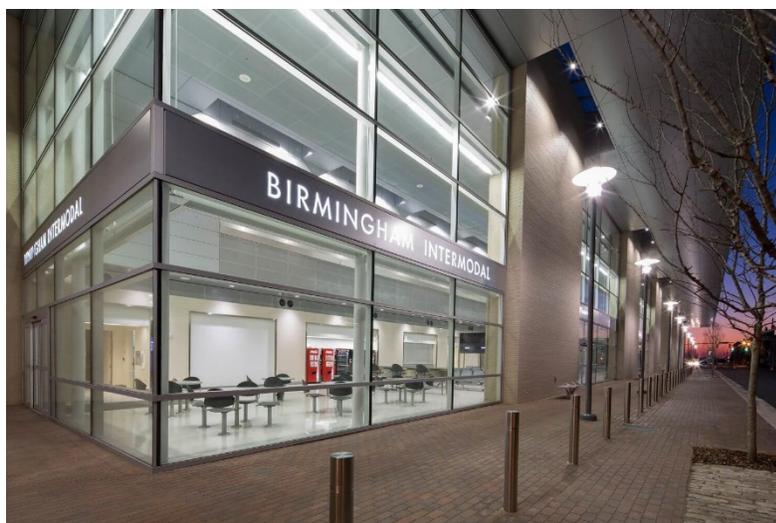


Photo Credit: MAX Transit

Terminus stations serving multiple rail lines are likely to consist of multiple platforms for passenger rail travel and have large facilities dedicated to passenger circulation, transfers, short- and long-term parking, and connection with local

transportation services. They tend to attract the most passengers among a large catchment area and can thus accommodate automobiles as well as transit, rideshare, or other alternate transportation modes. These stations are projected to experience the highest ridership along the route within the most developed areas and are thus the most expensive and complex station type to deliver.



4.4.1.2 Intermediate Stations

Intermediate stations at Greenville and Atmore, aside from being physically located intermediate of the two termini of this study, serve smaller cities and rural communities in the state. In Alternatives 1 and 2, these stations are generally located in the walkable downtown districts of these communities, within walking distance of a variety of local businesses and restaurants. In Alternative 3, they are generally located in the median of Interstate 65, close to a variety of commercial uses. An example intermediate station is the former Amtrak stop in Atmore, shown in Figure 29.

These stations generally consist of a single platform and a small building facility with a waiting area, ticketing booths, and restrooms. Due to smaller surrounding populations, these stations tend to attract a smaller number of passengers than for terminus stations, but still among a large catchment area. Most passengers travel to the stations via automobile. These stations are projected to experience lower ridership along the route and are generally simpler and less expensive to deliver.

Figure 29: Downtown Atmore Station



Photo Credit: North Escambia News

4.4.1.3 Vehicle Storage and Maintenance

Passenger rail vehicles require facilities for nightly storage, cleaning, fueling, stocking and inventory, light maintenance, and occasional heavy maintenance. Ideally, VSMF facilities along passenger rail corridors are placed within close proximity to its termini, minimizing operational deadhead costs. Up to three VSMF locations are proposed along the Montgomery-Mobile passenger rail corridor: two full VSMFs in Montgomery and Mobile, and one smaller VSMF in Evergreen. The potential VSMF locations in Montgomery and Mobile, shown in the Technical Drawings (See Supplemental Appendix D), are assumed to have a footprint of 2,000 feet by 700 feet based on similar work that AECOM has conducted in similar rail studies along the Northeast Corridor. In Evergreen, a smaller storage facility location of footprint 2,000 feet by 175 feet is identified midway along the corridor for Alternatives 1 and 2 only.

4.4.2 Track Improvements

4.4.2.1 Alternative 1

Alternative 1 would restore Amtrak's *Gulf Breeze* service that had previously operated along the CSX corridor between Birmingham, Montgomery, and Mobile at an average speed of 48 miles per hour. No geometric or capacity improvements are proposed. Infrastructure improvements in Alternative 1 are limited to construction or upgrading of stations and VSMF facilities only.

4.4.2.2 Alternative 2

Alternative 2 would provide enhanced passenger rail service along the CSX corridor between Birmingham, Montgomery and Mobile through the implementation of significant geometric and capacity improvements that increase average speed for passenger trains along the corridor to 70 miles per hour. In addition to station and VSMF facility improvements from Alternative 1, Alternative 2 also proposes a range of track improvements. Of the 152 curves currently along the CSX corridor between Montgomery and Mobile, an estimated 23 curves have been eliminated due to 12 track realignments along the corridor. Another 27 curves have been flattened through increased curve radii to accommodate design speeds of 79 miles per hour for passenger trains. Finally,



another 30 curves are adequate in curve radii to accommodate design speeds of 79 miles per hour, but may require lengthened transitions for this accommodation.

In addition to geometric improvements, ten existing sidings along the CSX corridor are to be impacted. In this study, a goal for sidings is to accommodate freight trains of up to two miles long. In some cases, sidings are not currently of adequate length two miles (10,560 feet) and must be lengthened, while in other cases, proposed track projects, such as realignments and curve flattening measures, warrant changes to these sidings.

4.4.2.3 Alternative 3

Alternative 3 would provide higher-speed passenger rail service along a new exclusive-use passenger rail corridor situated mostly in the median of I-65 between Birmingham, Montgomery, and Mobile. The corridor would mostly consist of a single track, with strategic locations of sidings at various points to accommodate movements based on which proposed operating alternative is selected.

In Montgomery, Alternative 3 begins for a short distance on the CSX corridor to access the proposed Montgomery station. Heading south, it begins to transition to I-65 right-of-way via cut-and-cover tunnel, converging into the highway median close to Day Street. Steep grades and a 100-foot elevation increase between the CSX Corridor and Interstate 65 likely necessitate this tunnel. Interstate 65 between Day Street and US Highway 80 lacks a center median and requires widening of the interstate to accommodate the proposed passenger rail track in this area.

From US Highway 80 in Montgomery to Industrial Parkway in Saraland, the existing median is to accommodate the proposed passenger rail track, while I-65 corridor south of Industrial Parkway to West Lee Street in Chickasaw must be widened to accommodate the track. South of West Lee Street, another 0.77-mile cut-and-cover tunnel carries the track out of the I-65 median, under the I-165 overpass, and to the existing Illinois Central Rail Corridor west of Wilson Avenue in Mobile. It then uses existing facilities to tie into the CSX corridor once again as it approaches the proposed Mobile station.

While this study originally evaluated passenger rail on I-65 with a design speed of 79 miles per hour, it was determined that curves along the I-65 corridor are sweeping enough to support even higher speeds. Hence, the design speed for track along I-65 between Montgomery and Mobile is 110 miles per hour, the typical maximum speed for diesel-powered trains.

As Alternative 3 is a retrofit of an existing transportation facility, significant investment must be made to be able to accommodate the proposed passenger rail track. As described above, two sections of I-65 must be widened near Montgomery and Mobile, respectively. Most existing roadway bridges intersecting I-65 currently contain center piers, some of which may require replacement. In addition, steep grades above the allowable 2.50 percent for passenger rail necessitate expensive retaining walls to carry the track at a gentler grade. Finally, between SR 225 and Dead Lake Marina Road, a six-mile aerial structure above the Mobile River Floodplain must be constructed to carry the track into the Mobile area.

4.4.3 Summary

The proposed infrastructure improvements described above are summarized in **Table 21** for all alternatives. Improvements in Alternative 1 are limited to proposed stations and VSMF facilities and can accommodate passenger trains of 48 miles per hour on average, whereas Alternative 2 proposes significant geometric track improvements and some improvements to capacity via siding upgrades, allowing for passenger trains of 70 miles per hour on average. Finally, Alternative 3 proposes mostly new track contained in the median of the I-65 corridor in addition to stations and VSMF facilities similar to Alternatives 1 and 2, resulting in a corridor that can accommodate passenger trains with an average speed of 101 miles per hour.



Table 21: Infrastructure Improvements for Each Alternative

System Characteristics	Alternative 1		Alternative 2		Alternative 3	
	Quantity	Track Miles	Quantity	Track Miles	Quantity	Track Miles
Geometric Improvements						
Realignments	-	-	12	23.0	N/A	N/A
Increased Radius of Curvature	-	-	27	11.0	N/A	N/A
Lengthened Transitions	-	-	30	3.5	N/A	N/A
New Track	N/A	N/A	N/A	N/A	N/A	167.6
Capacity Improvements						
Extended Sidings	-	-	10	15.2	N/A	N/A
Facilities						
Terminus Stations	2	N/A	2	N/A	2	N/A
Intermediate Stations	2	N/A	2	N/A	2	N/A
VSMF Facilities	3	N/A	3	N/A	2	N/A

4.5 Operating Requirements

The following operating requirements for each alternative, presented in Table 22, were developed based on proposed schedules presented in Section 4.3 and proposed infrastructure improvements presented in Section 4.5. All operations were calculated for the full Birmingham-Montgomery-Mobile route, and they include findings from the Phase I report between Birmingham and Montgomery and from the current report between Montgomery and Mobile. Average speeds of 48, 70, and 101 miles per hour were found based on infrastructure improvements proposed along the Montgomery-Mobile route, but have been applied to the full route between Birmingham and Mobile. Layover time was calculated on average to be ten percent of run time.



Table 22: Summary of Operating Requirements

	Alternative	Speed (mph)	One-Way Route Miles	One-Way Run Time	Daily Train Trips	Annual Revenue		Lay Over Time	Cycle Time	Trains
						Train Miles	Train Hours			
Alternative 1	1a	48	277.1	5:44	1	144,623	3,328	1:12	12:45	2
	1b	48	277.1	5:44	3	433,868	9,983	1:12	12:45	4
	1c	48	277.1	5:44	6	867,737	19,967	1:12	12:45	7
Alternative 2	2a	70	277.1	3:56	1	144,623	2,284	0:50	8:45	2
	2b	70	277.1	3:56	3	433,868	6,851	0:50	8:45	3
	2c	70	277.1	3:56	6	867,737	13,703	0:50	8:45	5
Alternative 3	3a	101	257.7	2:43	1	134,506	1,479	0:34	5:40	2
	3b	101	257.7	2:43	3	403,518	4,437	0:34	5:40	2
	3c	101	257.7	2:43	6	807,035	8,874	0:34	5:40	3



5. Demand and Revenue Estimation

5.1 Ridership and Revenue Methodology

In order to estimate potential ridership within the study corridor, the study team created a methodology based on demographic, socioeconomic, and travel data. In addition to demand between Montgomery and Mobile, this methodology also builds upon the work completed in Phase I, considering the combined effects of restoring passenger rail service between Birmingham, Montgomery, and Mobile, as well as rail connections to other Amtrak lines in Birmingham (*Crescent*) and Mobile (pending restoration of the *Sunset Limited*).

The rail ridership and revenue figures were developed using a national intercity rail model developed by AECOM for corridor analysis for Amtrak's Northeast Corridor, Southeast Corridor, Florida, and multiple corridors in the Midwest, calibrated to match existing trip volumes using data from the Alabama Statewide Model and the Mobile and Montgomery MPO regional models. Revenue projections are based on fare estimates compiled from historic ticket prices, current Amtrak prices on comparable routes, and results from Phase I of this study.

The inputs required for this model analysis include:

- Geographic zonal system covering the study area,
- Existing rail and bus ridership,
- Socioeconomic data for the zone system,
- Highway network connecting all of the zones and rail stations in the study area,
- Rail schedules for the existing and proposed service, and
- Travel characteristics for auto, air, and rail.

5.1.1 Model Structure

The travel demand forecasting approach uses a two-stage model system. The first stage forecasts the growth in the total number of person trips in each market, and the second stage predicts the market share of each available mode in each market. Both stages are dependent on the service characteristics of each mode and the socioeconomic characteristics of the corridor. The key markets addressed in the forecasting model system are defined by geographical location (i.e., origin-destination zone pair).

The first stage addresses the growth in the total intercity person travel volumes. This includes “natural” growth and “induced” demand. The “natural” growth component is captured by the growth in population and employment. The “induced” component is captured by including a measure of the composite level of modal service, expressed in the mode share model, within the total travel model.

The second stage of the model is the mode share component, which estimates the share of total person travel by mode. This model considers both auto and rail. Key variables in the mode share model include:

- Line haul travel time,
- Access/egress time,
- Travel cost or fare,
- Frequency of service.



Total market-to-market frequencies were scaled based on arrival and departure times of each train serving the market. These scaling factors are based on the observed performance of trains in different departure/arrival time slots within rail corridors throughout the US. The rail utility and market share is determined by the combination of arrival and departure factors along with the time to the previous and subsequent trains, travel time, cost, access/egress times and on-time performance.

The mode choice model was calibrated to match other long-distance corridors in the region by running the time, cost, and frequency characteristics of the existing Amtrak service, with current population, employment, and income data. The model parameters were then adjusted until the forecasted output corresponded with the actual ridership data.

The mode choice component of the model was calibrated for the rail, bus, and air markets, with the remainder of the total market being made up of auto travel. This was done using existing Amtrak ridership data in the study area, namely the *Crescent* route, as well as available information about intercity bus ridership. The model was then calibrated to match rail ridership by station pair distance, i.e. matching the number of trips less than 100 miles, between 100 and 200 miles, and greater than 200 miles. The existing intercity bus market was calculated based on current service provided with industry loading factors applied. The current air market was obtained from the Airline Origin and Destination Survey (DB1B), which is a ten percent sample of airline tickets which includes origin, destination, and other itinerary details. This was used to estimate the number of annual passengers between airports within the study area.

5.2 Ridership Forecast

Using the model described in the previous section, ridership was estimated for three alternatives described in Section 4.2.

Alternative 1 would restore past *Gulf Breeze* Amtrak service along the CSX corridor with an average speed of 48 mph. Trip time from Birmingham to Mobile for this alternative would be approximately 5 hours, 44 minutes traveling from Montgomery to Mobile would take around 3 hours, 44 minutes. Ridership estimates were compiled for service offering one, three, and six daily roundtrips.

Alternative 2 would also operate along the CSX corridor, but track improvements would allow an average speed of 70 miles per hour. Travel times between Montgomery and Mobile would be approximately 2 hours, 34 minutes and between Birmingham and Mobile would take around 3 hours, 56 minutes. Ridership estimates were compiled for service offering one, three, and six daily roundtrips.

Alternative 3 would operate on an exclusive-use track along the I-65 corridor. Trip times would be 2 hours, 43 minutes for Birmingham to Mobile, and 1 hour, 46 minutes between Montgomery and Mobile.



Table 23: Ridership Forecast for Service Alternatives

	Speed (mph)	Daily Round Trips	Annual Passenger Arrivals and Departures					Total
			BHM	MGM	GRV	ATR	MOB	
Alternative 1	48	1	41,600	38,700	9,900	6,300	15,200	55,850
	48	3	175,700	166,200	40,600	23,500	59,600	158,500
	48	6	147,300	143,700	39,100	24,000	61,500	207,800
Alternative 2	70	1	72,700	65,800	16,700	10,700	28,000	96,960
	70	3	175,700	166,200	40,600	23,500	59,600	232,800
	70	6	253,800	236,400	58,600	35,300	92,600	338,350
Alternative 3	101	1	119,200	113,600	27,900	16,200	40,100	151,200
	101	3	299,800	272,900	65,500	40,900	106,600	392,850
	101	6	414,100	374,300	91,900	59,400	160,900	550,300

5.3 Revenue Forecast

Revenue projections based on forecasted ridership and average trip fares for each alternative are shown below in Table 24. Each alternative and frequency combination generated a different mix of station pairs within the model, which creates a unique average trip fare for each service scenario.

Table 24: Revenue Forecast for Service Alternatives

	Speed (mph)	Daily Round Trips	Annual Ridership	Average Trip Fare	Passenger Revenue
Alternative 1	48	1	55,850	\$39.09	\$2,183,400
	48	3	158,500	\$38.82	\$6,153,000
	48	6	207,800	\$39.22	\$8,149,000
Alternative 2	70	1	96,960	\$39.55	\$3,834,000
	70	3	232,800	\$38.14	\$8,879,000
	70	6	338,350	\$38.80	\$13,127,000
Alternative 3	101	1	151,200	\$40.29	\$6,092,000
	101	3	392,850	\$39.04	\$15,336,000
	101	6	550,300	\$39.70	\$21,847,000



5.4 Cost of Alternative Modes of Transportation

In order to be an attractive transportation option, passenger rail service needs to be cost-competitive to the consumer when compared to other modes of travel. For this, the projected ticket prices were compared to current cost of automobile and intercity bus travel. Direct commercial air travel is not currently offered between Montgomery and Mobile and was thus not considered.

5.4.1 Private Automobile

By road, the distance between the downtowns of Montgomery and Mobile is approximately 169 miles, the route runs mostly along Interstate 65. In usual traffic conditions, this trip can take between 2 hours, 20 minutes and 2 hours, 40 minutes. The current Federal mileage rate, which considers fuel prices and vehicle wear-and-tear, is 58 cents per mile. With the assumption of a \$5 fee for parking, this makes a one-way trip between the two cities approximately \$103. Travel from Birmingham to Mobile is around 257 miles, yielding a driving cost of \$149. There are no tolls along the route.

5.4.2 Intercity Bus

Greyhound service between the two cities is offered four times daily. Greyhound also offers service continuing to Birmingham. Tickets may be purchased online, by telephone, or in person at Greyhound stations. Advance online purchases offer the lowest fares, with prices varying between \$16 and \$23, plus a \$2.99 processing fee. Purchasing tickets the day of travel typically results in a higher cost.

Three departures offer express service and have a travel time comparable to driving (2h, 35m). The 2:55 PM departing Mobile and 11:00 AM departing Montgomery offer an intermediate stop in Evergreen and take slightly longer (3h, 5m). Travel times are subject to delay based on traffic conditions. Greyhound buses offer amenities such as free Wi-Fi and onboard restrooms.

Table 25: Greyhound Bus Timetable

Departure City	Departure Time	Arrival City	Arrival Time	Fare
Mobile	12:45 AM	Montgomery	3:20 AM	\$16
Montgomery	1:45 AM	Mobile	4:25 AM	\$18
Mobile	4:30 AM	Montgomery	7:10 AM	\$22
Montgomery	11:00 AM	Mobile	1:50 PM	\$18
Mobile	11:25 AM	Montgomery	2:00 PM	\$16
Montgomery	5:55 PM	Mobile	8:45 PM	\$26
Mobile	2:55 PM	Montgomery	6:00 PM	\$16
Montgomery	11:20 PM	Mobile	2:00 AM	\$19

Megabus also offers intercity service between Montgomery and Mobile, but no connection to Birmingham is offered as of the writing of this report. Megabus service is offered twice daily in each direction. Tickets may be bought online or over the phone for between \$10 and \$16 dollars, plus a \$2.50 booking fee.

Travel time for Megabus trips between the two cities are estimated to take slightly longer than driving, with travel times between 3 hours, 20 minutes and 3 hours, 30 minutes. Megabus offers amenities to its riders such as free Wi-Fi and onboard restrooms.



Table 26: Megabus Timetable

Departure City	Departure Time	Arrival City	Arrival Time	Fare
Montgomery	12:35 AM	Mobile	3:55 AM	\$16
Mobile	12:50 AM	Montgomery	4:20 AM	\$16
Montgomery	1:25 PM	Mobile	4:55 PM	\$18
Mobile	2:00 PM	Montgomery	5:30 PM	\$16



6. Capital and O&M Cost Estimation

6.1 Capital Cost Methodology

Estimated capital costs were determined using the Standard Cost Categories (SCC) cost estimate template published by the Federal Transit Administration (FTA). Unit costs were considered based on the costs of various peer commuter rail and transit projects throughout the United States and were adjusted to 2018 dollars. Total estimated capital costs are designed to include hard costs, soft costs, and allocated contingencies of five percent. The figure was then adjusted further to an assumed construction start in year 2025.

While the SCC cost estimate template is designed as a tool for conceptual design, it does account for significant differences in cost between types of guideway such as the retained cut or retained fill sections proposed in Alternative 3, or the at-grade realigned sections proposed in Alternative 2. However, capital costs should always continue to be adjusted and refined as the planning and design process advances.

6.2 Capital Cost Estimates

6.2.1 Alternative 1

Capital costs in Alternative 1 from Montgomery to Mobile are limited to construction or upgrading of four proposed stations, three VSMF facilities, and purchase of up to eight total trainsets: seven to maintain up to six roundtrips per day plus one spare. No geometric or capacity improvements are proposed. **Table 27** contains a summary of estimated capital costs for Alternative 1.

Table 27: Capital Costs for Alternative 1

System Characteristics	Alternative 1		
	Quantity	Track Miles	Capital Costs (2025\$ millions)
Geometric Improvements			
Realignments	-	-	-
Increased Radius of Curvature	-	-	-
Lengthened Transitions	-	-	-
New Track	N/A	N/A	-
Capacity Improvements			
Extended Sidings	-	-	-
Facilities			
Terminus Stations	2	N/A	\$125
Intermediate Stations	2	N/A	\$35
VSMF Facilities	3	N/A	\$130
Rolling Stock			
Trainsets	8	N/A	\$105
TOTAL CAPITAL COSTS:			\$395



6.2.2 Alternative 2

Over 60 percent of capital costs in Alternative 2 from Montgomery to Mobile are dedicated to geometric track improvements intended to accommodate average passenger train speeds of 70 miles per hour. Other capital costs include extension of ten existing sidings, construction or upgrades for four proposed stations, three VSMF facilities, and purchase of up to six total trainsets: five to maintain up to six roundtrips per day plus one spare.

Note that Alternative 2 requires fewer trainsets than Alternative 1, despite offering more trips per day than Alternative 1. This is because of the average speeds of the two alternatives. At 70 miles per hour on average, each trainset in Alternative 2 can traverse the corridor in less time, allowing the reverse trip to be made with less layover time at the terminus station. **Table 28** contains a summary of estimated capital costs for Alternative 2.

Table 28: Capital Costs for Alternative 2

System Characteristics	Alternative 2		
	Quantity	Track Miles	Capital Costs (2025\$ millions)
Geometric Improvements			
Realignments	12	23.0	\$520
Increased Radius of Curvature	27	11.0	\$250
Lengthened Transitions	30	3.5	\$55
New Track	N/A	N/A	-
Capacity Improvements			
Extended Sidings	10	15.2	\$135
Facilities			
Terminus Stations	2	N/A	\$125
Intermediate Stations	2	N/A	\$35
VSMF Facilities	3	N/A	\$130
Rolling Stock			
Trainsets	6	-	\$80
TOTAL CAPITAL COSTS:			\$1,330

6.2.3 Alternative 3

Alternative 3 from Montgomery to Mobile requires the construction of approximately 168 miles of new, dedicated passenger rail track, accounting for over 95 percent of the proposed capital costs in this alternative. In addition, a \$100 million allowance for construction of sidings along this route has been accommodated, but their exact placement and length will be heavily dependent on operational characteristics and scheduling to be chosen in more advanced phases of study. Other capital costs include construction or upgrading of four



proposed stations, two VSMF facilities (an intermediate VSMF facility in Evergreen is not considered for this alternative), and purchase of up to four total trainsets: three to maintain up to six roundtrips per day and one spare. Note that this cost estimate does not currently include replacement or retrofit of the 52 overpasses that currently exist along the I-65 corridor. **Table 29** contains a summary of estimated capital costs for Alternative 3.

Table 29: Capital Costs for Alternative 3

System Characteristics	Alternative 3		
	Quantity	Track Miles	Capital Costs (2025\$ millions)
Geometric Improvements			
Realignments	N/A	N/A	-
Increased Radius of Curvature	N/A	N/A	-
Lengthened Transitions	N/A	N/A	-
New Track	N/A	167.6	\$9.015
Capacity Improvements			
Extended Sidings	N/A	N/A	\$100
Facilities			
Terminus Stations	2	N/A	\$125
Intermediate Stations	2	N/A	\$35
VSMF Facilities	2	N/A	\$110
Rolling Stock			
Trainsets	4	-	\$55
TOTAL CAPITAL COSTS:			\$9,440

6.3 Operating and Maintenance Cost Methodology

Annual operating and maintenance costs were developed for each alternative based on the proposed schedules, infrastructure improvements, and operating characteristics described in **Sections 4.3, 4.4, and 4.5**. Operating and maintenance costs were calculated using two methods together forming a range, with the lower value based on cost per train-mile and the higher value based on cost per train-hour. Unit costs for both methods used in the Phase I report were \$17.29 per revenue train-mile and \$2,494 per revenue train-hour (both in 2011 dollars) based on averages of the 15 peer systems evaluated in that report.

In this study, these 2011 unit costs were inflated at an assumed rate of 3.5 percent to 2018 dollars, resulting in unit costs of \$22.00 per revenue train-mile and \$3,173 per revenue train-hour. They were then multiplied by the calculated annual revenue train-miles and revenue train-hours, respectively.



6.4 Operating and Maintenance Cost Estimates

Table 30 below describes the operational characteristics and assumptions that were used in the calculation of O&M costs for each alternative. Then, Table 31 presents the range of annual O&M costs anticipated for each passenger rail alternative between Birmingham, Montgomery, and Mobile.

Table 30: Annual Operating Plan Characteristics for Each Alternative – Montgomery to Mobile

System Characteristics	Alternative 1			Alternative 2			Alternative 3		
	1a	1b	1c	2a	2b	2c	3a	3b	3c
One-Way Run Time (min)	346.3	346.3	346.3	237.5	237.5	237.5	153.1	153.1	153.1
Directional Route Miles	277.1	277.1	277.1	277.1	277.1	277.1	257.7	257.7	257.7
Cycle Time (min)	765.0	765.0	765.0	525.0	525.0	525.0	340.0	340.0	340.0
Peak Trainsets	2	4	7	2	3	5	2	2	3
Spare Trainsets	1	1	1	1	1	1	1	1	1
Total Fleet	3	5	8	3	4	6	3	3	4
Revenue Train-Miles	144,623	433,868	867,737	144,623	433,868	867,737	134,506	403,518	807,035
Revenue Train-Hours	3,328	9,983	19,967	2,284	6,851	13,703	1,479	4,437	8,874
Average Speed (mph)	48	48	48	70	70	70	101	101	101
Stations	4	4	4	4	4	4	4	4	4

Table 31: Annual Operations and Maintenance (O&M) Cost Estimates for Each Alternative

Range of Annual O&M Costs (2018\$ millions)	Alternative 1			Alternative 2			Alternative 3		
	1a	1b	1c	2a	2b	2c	3a	3b	3c
Based on cost per mile	\$3.2	\$9.5	\$19.1	\$3.2	\$9.5	\$19.1	\$3.0	\$8.9	\$17.8
Based on cost per train-hour	\$10.6	\$31.7	\$63.4	\$7.2	\$21.7	\$43.5	\$4.7	\$14.1	\$28.2



7. Cost-Benefit Evaluation

7.1 Transportation Benefits

The most direct benefits of passenger rail stem from the increased mobility options in the communities served. Passenger rail provides another transportation alternative for individuals in these communities to use, and whether they choose to or not, the communities at large reap benefits from having passenger rail as an option. As stated in the Phase I report, benefits to those who choose to utilize passenger rail include enhanced comfort, reduced travel stress, increased personal productivity, lower transportation costs, and shorter travel times. As individuals opt to ride passenger rail services, vehicle miles traveled (VMT) are reduced, yielding additional benefits such as decreased traffic congestion, enhanced safety, decrease in risk of accidents and collisions, and air quality improvement.

7.1.1 Economic and Community Benefits

Passenger rail yields many tangible economic benefits to the surrounding communities. The most direct benefit is enhanced mobility options for all individuals in those communities. With passenger rail, individuals have easier access to jobs, healthcare, education, and entertainment opportunities in major cities throughout the corridor, catalyzing economic development opportunities in every community it serves. Positive impacts are especially felt by seniors, the disabled community, youth, and individuals residing in households not owning an automobile, some of whom currently have few travel alternatives between Birmingham, Montgomery, and Mobile.

Land around passenger rail stations typically attracts demand for higher-density mixed-use development in which residents can live, work, and play. This sort of dense development is associated with higher property values, which can increase property tax revenues for municipalities. This type of development also lowers one's dependence on their car and encourages walking and biking, promoting more active and healthy lifestyles. Cities across the country have seen this demand escalate over the last decade and have invested or are investing in infrastructure that promotes walkability and sustainability from a city-wide lens.

7.1.2 CSX Railroad Benefits

Freight rail operations along the CSX corridor could benefit significantly from Alternative 2 through the proposed passenger rail improvements. Significant geometric improvements to the existing tracks would support faster freight train movements and more dependable operations along the corridor, while capacity improvements such as new or extended sidings would ensure freight operations run as efficiently as possible alongside passenger rail service. Other potential improvements to the CSX corridor include grading and drainage, implementation of positive train control, and upgrading of signal infrastructure. Further coordination must be initiated with CSX Transportation in more advanced phases of study to identify further rail improvements that may be necessary and mutually beneficial to freight and passenger rail operations in the future between Birmingham, Montgomery, and Mobile.

7.1.3 Environmental Benefits

Passenger rail also yields many benefits to the short- and long-term health of the environment. As stated in the Phase I report, passenger trains can move large amounts of individuals while generating lower greenhouse gas emissions per passenger than if those individuals had taken automobiles. As a result, air quality is improved. Individuals who utilize alternative transportation modes also tend to walk more than those who do not, reducing their carbon footprint and encouraging environmental sustainability and livability. Potential high-density development around passenger rail stations could further encourage walking as a viable alternative to



the automobile, connecting individuals with many essential amenities such as grocery stores, healthcare, and entertainment all within close proximity to one another, at the same time reducing the number of drivers on the road.

A significant benefit to be felt on the Birmingham-Montgomery-Mobile corridor is in relation to emergency response and evacuation procedures. Passenger trains can aid in evacuation when inclement weather strikes, with the capacity to move large amounts of individuals efficiently without the traffic congestion that is usually experienced on roadways during this time. Unlike planes that cannot operate during inclement weather or automobiles that can come to a standstill on major freeways on the Gulf Coast, trains can carry high numbers of people with relative ease and safety during natural disasters or emergency situations.

7.2 Evaluation Criteria

Each of the following evaluation criteria were based on the five goals identified through stakeholder outreach in Phase I of this study. While these goals focused on the Phase I corridor between Birmingham and Montgomery, they have been adapted for use in the passenger rail corridor as a whole between Birmingham, Montgomery, and Mobile. **Table 32** summarizes these five goals and their respective evaluation criteria.

Table 32: Evaluation Criteria for Alternatives 1, 2, and 3

Goals	Evaluation Criteria
Primary Mode Choice	<ul style="list-style-type: none"> Will travelers save time riding the train between Birmingham and Mobile? Will there be sufficient number of riders using the passenger service between Birmingham and Mobile?
Regional Connectivity	<ul style="list-style-type: none"> Does the passenger service provide direct connections to downtown Birmingham, Montgomery, and Mobile, and/or to other activity centers?
Reduction in Auto Travel	<ul style="list-style-type: none"> Does the passenger service reduce auto travel in the corridor, thereby improving air quality?
Cost-Effectiveness	<ul style="list-style-type: none"> Is the investment in a passenger rail system between Birmingham and Mobile economically feasible based on cost-effectiveness measures: capital, O&M costs, and cost per rider
Implementation / Constructability	<ul style="list-style-type: none"> What is the degree of ease or difficulty constructing and/or implementing passenger rail between Birmingham and Mobile?

Source: Birmingham to Montgomery Passenger Rail Feasibility Study

Each factor listed in **Table 33** below was identified as a means to quantitatively measure the evaluation criteria set forth through previous stakeholder input.



Table 33: Evaluation Factors for Alternatives 1, 2, and 3

Criteria	Factors
Primary Mode Choice	<ul style="list-style-type: none"> • Estimated end-to-end travel time savings • Ridership per revenue train-hour
Regional Connectivity	<ul style="list-style-type: none"> • Direct connections to downtown Montgomery and Mobile • Connections to other activity centers
Reduction in Auto Travel	<ul style="list-style-type: none"> • VMT (vehicle miles of travel) reduction in corridor • Impact on regional travel and air quality
Cost-Effectiveness	<ul style="list-style-type: none"> • Total capital cost • Annual revenue to O&M cost percentage • Annual cost per rider
Implementation / Constructability	<ul style="list-style-type: none"> • Ease of constructability • Funding accessibility potential • Impact on freight railroad operations • Benefit to adjacent or crossing highway infrastructure

Source: Birmingham to Montgomery Passenger Rail Feasibility Study

Each corridor alternative was assigned a score for each factor on a scale ranging from Low (=1) to Medium (=2) and to High (=3). The scores were then added together to find a comprehensive score for each alternative. Evaluation results are discussed in the following section.

7.3 Evaluation Results

All three corridor alternatives were evaluated according to the evaluation criteria and factors discussed in Section 7.2. Table 34 documents how each alternative scored according to the evaluation factors.



Table 34: Evaluation Matrix for Alternatives 1, 2, and 3

Criteria	Alternative 1						Alternative 2						Alternative 3					
	Alternative 1a		Alternative 1b		Alternative 1c		Alternative 2a		Alternative 2b		Alternative 2c		Alternative 3a		Alternative 3b		Alternative 3c	
	Description	Rating	Description	Rating	Description	Rating	Description	Rating	Description	Rating	Description	Rating	Description	Rating	Description	Rating	Description	Rating
Primary Mode Choice																		
Estimated end-to-end travel time savings	None – unless traffic is significantly delayed on I-65	1	None – unless traffic is significantly delayed on I-65	1	None – unless traffic is significantly delayed on I-65	1	Low – comparable travel time unless traffic is significantly delayed on I-65	2	Low – comparable travel time unless traffic is significantly delayed on I-65	2	Low – comparable travel time unless traffic is significantly delayed on I-65	2	High – significantly shorter travel time, especially if traffic is significantly delayed on I-65	3	High – significantly shorter travel time, especially if traffic is significantly delayed on I-65	3	High – significantly shorter travel time, especially if traffic is significantly delayed on I-65	3
Total annual ridership	55,850	1	158,500	2	207,800	3	96,960	1	232,800	3	338,350	3	151,200	2	392,850	3	550,300	3
Regional Connectivity																		
Direct connections to Downtown Montgomery and Mobile	Excellent	3	Excellent	3	Excellent	3	Excellent	3	Excellent	3	Excellent	3	Good	2	Good	2	Good	2
Connections to other activity centers	Excellent	3	Excellent	3	Excellent	3	Excellent	3	Excellent	3	Excellent	3	Poor	1	Poor	1	Poor	1
Reduction in Auto Travel																		
VMT (vehicle miles of travel) reduction in corridor	Small	1	Small	1	Small	1	Medium	2	Medium	2	Medium	2	Medium	2	Medium	2	Medium	2
Impact on regional travel and air quality	Negligible	1	Negligible	1	Negligible	1	Small	2	Small	2	Small	2	Small	2	Small	2	Small	2
Cost-Effectiveness																		
Total capital cost	\$395 M	3	\$395 M	3	\$395 M	3	\$1,330 M	2	\$1,330 M	2	\$1,330 M	2	\$9,440 M	1	\$9,440 M	1	\$9,440 M	1
Annual revenue to O&M cost percentage	20.6%	1	19.4%	1	12.9%	1	53.3%	2	40.9%	1	30.2%	1	129.6%	3	108.8%	3	77.5%	2
Total annual cost per rider	\$189.79	1	\$200.00	1	\$305.10	1	\$74.26	2	\$93.21	2	\$128.57	1	\$31.08	3	\$35.89	3	\$51.24	2
Implementation / Constructability																		
Ease of constructability	High – no track improvements along CSX corridor, only stations and VSMF facilities	3	High – no track improvements along CSX corridor, only stations and VSMF facilities	3	High – no track improvements along CSX corridor, only stations and VSMF facilities	3	Medium – significant track improvements along CSX corridor	2	Medium – significant track improvements along CSX corridor	2	Medium – significant track improvements along CSX corridor	2	Low – construction of 167.6 miles of new track including tunnel and retained cut or fill sections + retrofit of the I-65 corridor	1	Low – construction of 167.6 miles of new track including tunnel and retained cut or fill sections + retrofit of the I-65 corridor	1	Low – construction of 167.6 miles of new track including tunnel and retained cut or fill sections + retrofit of the I-65 corridor	1
Funding Accessibility Potential	High	3	High	3	High	3	Moderate	2	Moderate	2	Moderate	2	Low	1	Low	1	Low	1
Impact on freight railroad operations	Medium	2	Medium	2	Medium	2	Medium	2	Medium	2	Medium	2	Low	3	Low	3	Low	3
Benefit to adjacent or crossing highway infrastructure	Low	1	Low	1	Low	1	Low	1	Low	1	Low	1	Low	1	Low	1	Low	1
Totals:		24		25		26		26		27		26		25		26		24
Ranking:		4		3		2		2		1		2		3		2		4



7.3.1 Findings

Based on the evaluation matrix in **Table 31**, Alternative 2b scored the highest ranking overall with a score of 27. Alternatives 1c, 2a, 2c, and 3b all ranked second highest overall with a score of 26. Alternatives 1b and 3a scored 25 points and rank third highest overall. Alternatives 1a and 3c both yielded the lowest score, with 24 points. Determining factors that set these alternatives apart tended to be those associated with regional connectivity, funding and construction feasibility, and the relationship between ridership and operating costs.

7.3.1.1 Regional Connectivity

Alternatives 3a, 3b, and 3c along the I-65 corridor all scored low on factors related to regional connectivity, hurting their overall score. This is due to two primary reasons: I-65, like most Interstate highways, was built to bypass cities and towns in their route, and I-65 was built after most of these cities and towns were developed. The intermediate stations at Greenville and Atmore tend to be located two to six miles outside the population centers of those cities and are in less walkable areas overall, and other cities like Brewton and Bay Minette are located even further away. In addition, expensive tunnels would need to be constructed for the I-65 alternatives to even reach downtown Montgomery and Mobile. Meanwhile, the CSX corridor runs through these communities, putting passenger rail service squarely in the middle of their population centers.

7.3.1.2 Funding and Construction Feasibility

Complexity of construction associated with building 168 miles of new track and retrofitting the existing I-65 corridor to accommodate it in Alternatives 3a, 3b, and 3c resulted in significantly high capital costs and negative impacts to their scores. This alignment also conflicts with current Alabama Department of Transportation plans to add median lanes to Interstate 65 (See **Appendix A.4**). As such, Alternatives 3a, 3b, and 3c currently are not supported by ALDOT. Alternatives 1a, 1b, and 1c are all restorations of previously existing service and are projected to cost a reasonable \$400 million. Alternatives 2a, 2b, and 2c are approximately 3.5 times higher in capital costs due to the proposed geometric improvements and right-of-way acquisition required. They still score highly, however, for the level of improvements proposed, length of corridor, and the additional ridership generated, with approximately \$1.3 billion required in capital costs.

7.3.1.3 Ridership and Revenue versus Operating Costs

As service levels increase, operating costs required to sustain service levels also increase, while ridership also typically increases due to service that is more convenient and frequent. However, for all alternatives being studied, operating costs increased at a faster rate than the amount of additional ridership and associated ticket revenue earned, resulting in higher costs per passenger and more external funding required. The “b” alternatives offering three roundtrips per day tended to strike a balance between operating costs and ridership. By offering multiple weekday service trips on four-hour headways, these alternatives attract high levels of ridership while keeping operating costs associated with higher levels of service low. Alternatives offering only one roundtrip per day yielded low operating costs, but also low ridership. Alternatives offering six roundtrips per day yielded increased ridership and ticket revenues, but operating costs required for this level of service increased at an even greater rate, resulting in a lower score for these service scenarios.

7.3.2 Cost-Effectiveness

The previous section highlighted the intricate relationship between capital costs, operating costs, ridership, and revenue. Alternatives 1a, 1b, and 1c all yield the lowest capital costs overall, but also forecast the lowest ridership and revenue potential. Similarly, all alternatives 3a, 3b, and 3c all yield the highest capital costs but also the highest ridership and revenue potential. Also, greater frequencies per day attract greater ridership but also greater operating costs. To remedy these relationships, a measure of cost-effectiveness for each alternative has been calculated and displayed in **Table 35** below.



Table 35: Cost-Effectiveness Comparison of Intercity Passenger Rail Alternatives

Alternative	Total Capital Cost – Phases I and II (\$M)	Annualized Capital Cost (\$M)	Annual Operating Cost (\$M)	Annual Revenue (\$M)	Net Operating Cost (\$M)	Annual Ridership	Total Annual Cost (\$M)	Annual Cost per Annual Rider (\$)
1a	\$551.7	\$21.0	\$10.6	\$2.2	\$8.4	55,850	\$29.4	\$527
1b	\$551.7	\$21.0	\$31.7	\$6.2	\$25.5	158,500	\$46.5	\$294
1c	\$551.7	\$21.0	\$63.4	\$8.1	\$55.3	207,800	\$76.3	\$367
2a	\$1,663.6	\$63.4	\$7.2	\$3.8	\$3.4	96,960	\$66.8	\$689
2b	\$1,663.6	\$63.4	\$21.7	\$8.9	\$12.8	232,800	\$76.2	\$327
2c	\$1,663.6	\$63.4	\$43.5	\$13.1	\$30.4	338,350	\$93.8	\$277
3a	\$12,643.0	\$482.1	\$4.7	\$6.1	-\$1.4	151,200	\$480.7	\$3,179
3b	\$12,643.0	\$482.1	\$14.1	\$15.3	-\$1.2	392,850	\$480.9	\$1,224
3c	\$12,643.0	\$482.1	\$28.2	\$21.8	\$6.4	550,300	\$488.5	\$888



8. System Planning and Assessment

8.1 Peer System Comparisons

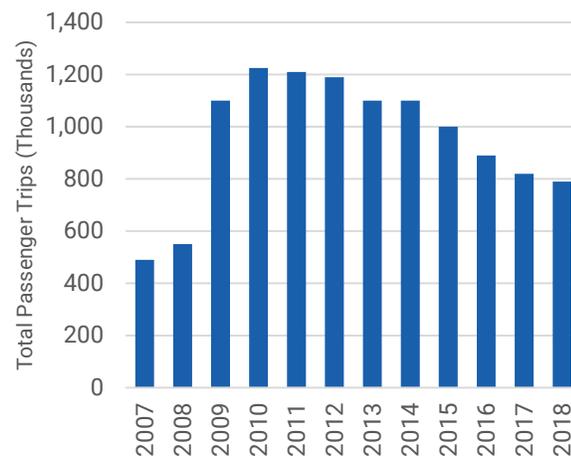
To provide insight into the potential operational characteristics of new potential passenger rail service, the Phase I report identified three peer systems with similar operating environments and demographic characteristics for the Birmingham to Montgomery section of the corridor. This section will recap the characteristics of these systems and provide an update regarding their operations since the publication of the Phase I report.

8.1.1 New Mexico Rail Runner Express

The New Mexico Rail Runner Express (NMRX) is a commuter rail line operating along a 96-mile corridor between New Mexico’s two largest cities, Santa Fe and Albuquerque. Constructed in 2006, this line has transported over 11 million passengers since service began. The Rail Runner Express currently offers 11 round trips daily. Passengers pay a zone-based fare according to how far they travel. Current one-way fares range between \$2 and \$10, with reduced fares available for senior citizens, students, youth, and those with disabilities. Children under nine and veterans of the US Armed Forces may ride fare free.

The Rail Runner Express has seen a decline in ridership since it was profiled in the Phase I report. Current ridership is at about 75 percent capacity, with an annual passenger count of around 787,000 in 2018. This is down from a high of over 1.2 million in 2010 and the lowest since the line was extended to Santa Fe in late 2008. In January of 2019, the New Mexico Legislative Finance Committee released a program evaluation report on the operation and cost effectiveness of the Rail Runner Express. This report identifies the reduced cost of driving, lack of serious Interstate congestion compared to peer cities, and a lack of substantial and coordinated transit-oriented development around NMRX stations as three of the main drivers of this ridership decline.

Figure 30: Total Passenger Trips on the NMRRX, 2007-2018



As funding for the NMRX comes mostly from an eighth-of-a-cent tax in counties where it operates, the decline in ridership is not projected to be a major funding problem. While the report does not propose a fare increase, it does recommend that stakeholders coordinate to develop a long-term ridership improvement strategy. Additionally, the report calls for a moratorium on new stations, along with the closing of one underperforming stop. Capital funds saved from these steps could instead be focused on safety or capacity improvements.



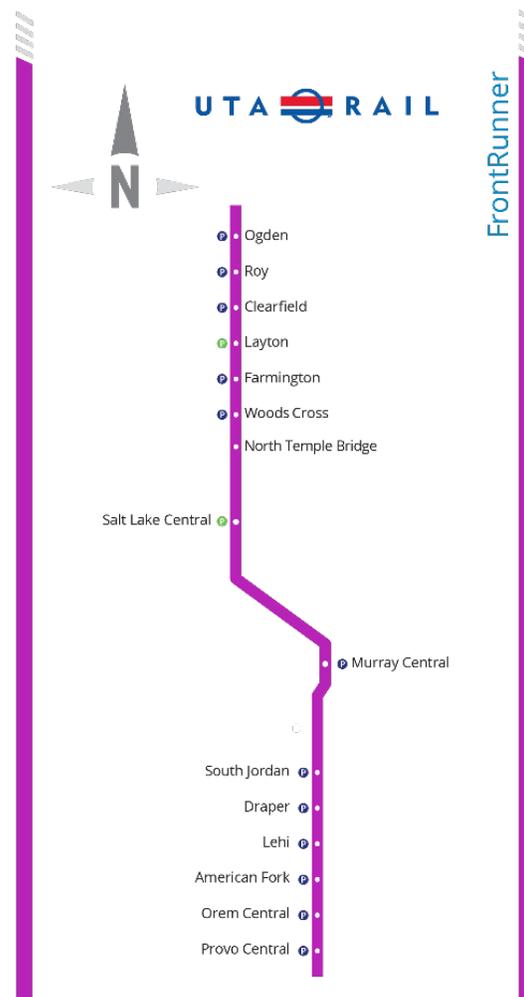
8.1.2 Utah Frontrunner

The Utah Frontrunner is a commuter train operated by the Utah Transit Authority (UTA) that serves an 87-mile corridor from Ogden to Provo, with Salt Lake City located in the center. FrontRunner trains run every half-hour in the mornings and evenings, and hourly during the midday. Fares are a \$2.50 base fare, with \$.60 added for each additional stop; the maximum fare (Ogden to Provo) is \$10.30.

Since the publication of the Phase I study, FrontRunner ridership has greatly increased, from 1.6 million annually in 2011 to 4.9 million in 2017. In 2018, UTA implemented Federally-required Positive Train Control (PTC) to improve safety along the line. This led to the closure of the Pleasant View station, which had been the line's northern terminus. Pleasant View had been the only stop located on tracks shared with Union Pacific Railroad; since Union Pacific uses a different PTC system than UTA, it was not cost-effective to continue service to the underperforming Pleasant View stop.

Despite this closure, UTA is working to further expand the FrontRunner system. In 2018, UTA began the process of acquiring additional right-of-way from Ogden to Brigham City, allowing for dedicated track operation and the potential reactivation of the Pleasant View station. UTA is also exploring adding a station north of Orem at Vineyard and expanding FrontRunner service south of Provo to Payson. Several more expensive enhancement projects, namely double-tracking and electrifying the corridor, have been ruled too costly by county and regional planning officials.

Figure 31: FrontRunner System Map



8.1.3 Altamont Corridor Express

The Altamont Corridor Express (ACE) is a California commuter rail line connecting the City of Stockton to the major job centers of San Jose and Silicon Valley, along with eight intermediate stops. ACE offers four daily trains in peak directional service; trains run west from Stockton in the morning, beginning at 4:20 AM, and return from San Jose beginning in the afternoon. The last eastbound train leaves San Jose at 6:38 PM. Fares vary according to distance traveled, with the maximum fare of \$15.50 for one-way and \$27.50 for a roundtrip. Tickets may be purchased online or in-person at select stations. Since the publication of the Phase I study, ridership on the ACE has increased from 700,000 in 2011 to over 1.3 million in 2017. In September of 2019, ACE began operating two trains in Saturday service.

ACE plays a major role in California's vision for enhanced rail connectivity. Planned ACE expansions include north to Sacramento, and southeast to Modesto and Merced, allowing connections to Amtrak, Caltrain, BART, and California's future Central Valley high-speed rail corridor. In July 2019, the San Joaquin Regional Rail Commission, along with its partners, released *Altamont Corridor Vision*, a long-term plan to expand and enhance ACE service. Envisioned improvements include electrification of the route, double-tracking and station



improvements, and the standardization of equipment between ACE and other rail partners, including the future Valley Link rail corridor between Stockton and Dublin.

8.1.4 Financial Viability

Table 36 below provides a comparison summary between the three peer systems discussed and the four highest-scoring Birmingham-Montgomery-Mobile passenger rail service scenarios (those with a ranking of 1 or 2). Information for the three peer systems were obtained through the FTA's National Transit Database (NTD) and/or the websites of each system.

Projected operating costs for these four service scenarios are roughly in line with the costs reported by peer systems. However, ridership estimates for the four highest-scoring alternatives are substantially lower than in peer systems, leading to higher costs per rider. A dedicated funding source would be necessary to subsidize the gap between ticket revenue and operational costs.

Table 36: Peer System Comparisons

Criteria	New Mexico Rail Runner Express	Utah Front Runner	California ACE	Birmingham – Mobile Passenger Rail Alternatives			
				2a	2b	2c	3b
Length (route miles)	93	87	86	277.1	277.1	277.1	257.7
Trains per weekday	22	70	8	6	12	6	6
Annual ridership (2011)	1,200,000	1,600,000	700,000	--	--	--	--
Annual ridership (2017)	770,000	4,900,000	1,300,000	96,960	232,800	338,350	392,850
Percent change	-36%	206%	71%	--	--	--	--
Annual operating costs	\$28.4 M	\$34.4 M	\$21.6 M	\$7.2 M	\$21.7 M	\$43.5 M	\$14.1 M
O&M costs/trip	\$36.01	\$7.02	\$16.61	\$74.26	\$93.21	\$128.57	\$35.89
Initial capital costs/mile	\$4.0 M	\$6.9 M	\$600 K	\$7.3 M	\$7.3 M	\$7.3 M	\$55.1 M

8.2 Phased Implementation

Due to the extended length of the Birmingham-Montgomery-Mobile corridor, implementation of passenger service may be more practically introduced in a series of phases. Possible phasing scenarios include:

- Initiating service along a minimum operable segment (Birmingham-to-Montgomery, for example),
- Implementing service at a lower speed with plans for future track upgrades, or
- A combination of these two scenarios.

Additional planning and coordination would be necessary to determine the best initial operating segment but building in a phased manner would allow flexibility to grow the system as funding became available while extending the benefits of service to a portion of the corridor.



8.3 Funding Options

To extend rail service from Montgomery to Mobile, capital costs for Alternative 1 would be an estimated \$395 million with operating costs between \$10.6 and \$63.4 million annually, depending on service frequency. Alternative 2 is more costly, with capital costs around \$1.3 billion and operating expenditures between \$7.2 and \$43.5 million annually. As capital costs are likely to be collateralized into annual debt and ticket revenues are not projected to cover operations, a dedicated revenue source will be required.

The peer systems covered in **Section 8.1** all rely on some form of sales tax to cover debt obligations and to subsidize operation. Implementing a new tax to fund passenger rail would most likely require the approval of the State Legislature or a successful statewide voter referendum.

The proposed rail service would serve communities in Jefferson, Montgomery, Butler, Escambia, and Mobile counties; these counties have a total combined population of 1,359,987 residents. Table 31 shows the annual cost per resident a new revenue stream would need to cover the net deficit after ticket revenues.

Table 37: Funding Needs

	Alternative 1			Alternative 2			Alternative 3		
	1	3	6	1	3	6	1	3	6
Daily Roundtrips									
Total Operation Expenses	\$10.6	\$31.7	\$63.4	\$7.2	\$21.7	\$43.5	\$4.7	\$14.1	\$28.2
Ticket Revenue	\$2.2	\$6.2	\$8.1	\$3.8	\$8.9	\$13.1	\$6.1	\$15.3	\$21.8
Net Operational Deficit	-\$8.4	-\$25.5	-\$55.3	-\$3.4	-\$12.8	-\$30.4	+\$1.4	+\$1.1	-\$6.4
Expense per Resident	\$5.18	\$18.75	\$40.66	\$2.50	\$9.41	\$22.35	--	--	\$4.71

8.4 Implementation Steps

This Phase II report presents proposed corridor alignments, ridership and revenue information, potential capital and O&M costs, and uses these data to offer cost-benefit evaluation of alternatives and comparison of these alternatives to peer systems. This feasibility study represents the preliminary effort toward implementing passenger rail service, and must be followed up with detailed planning, engineering, and environmental work before a final design can move forward. Additionally, a dedicated funding source and legislative approval must be secured.

Table 38 below provides an overview of some future planning efforts, intergovernmental coordination, and legislative actions that would be necessary to move forward with implementation of the alternatives presented in this study.



Table 38: Steps for Implementation

Item	Responsible Party	Key Stakeholders
#1 On-going coordination <ul style="list-style-type: none"> • Coordination with CSX, Port of Mobile, and other relevant freight rail interests to ensure continued freight movement • Coordination with FRA • Continued stakeholder engagement 	ADECA MPOs: Birmingham MPO Montgomery MPO Mobile MPO RPCs: RPCGB CARPDC SARPC	CSX Local governments
#2 CSX Passenger Rail Coordination & Planning <ul style="list-style-type: none"> • Selection of preferred alternative by ADECA, in coordination with CSX • Continued development of implementation details 	ADECA	CSX Local governments
#3 Regional Transportation Planning Updates <ul style="list-style-type: none"> • Continue the development of implementation details with input from regional planning agencies • Develop passenger rail recommendations for inclusion to updates of future state and regional plans 	ADECA MPOs RPCs ALDOT	Local governments
#4 Future Corridor Development Plans <ul style="list-style-type: none"> • Develop FRA-format Corridor Development Plan and Service Development Plan • Coordinate with FRA to determine applicable NEPA class of action and complete necessary environmental studies 	ADECA	CSX FRA MPOs RPCs
#5 Identify Dedicated Funding Sources <ul style="list-style-type: none"> • Identify and secure potential sources of capital assistance, such as from FRA's Consolidated Infrastructure and Safety Improvement Program • Identify and develop sources of operating funds, such as a sales or lodging tax in serviced communities 	ADECA State legislature MPOs RPCs	Local governments
#6 Develop Governance Plan <ul style="list-style-type: none"> • Coordinate with local and regional stakeholders, along with the state legislature, to create or designate an operating authority 	ADECA State legislature MPOs RPCs	Local governments
#7 Partner with Railroads <ul style="list-style-type: none"> • Develop a Memorandum of Understanding with CSX, the Port of Mobile, and any other rail operators within the service corridor 	Authority set up in step 6	CSX NARP ADECA Amtrak Local governments
#8 Coordinate with Local Transit Providers <ul style="list-style-type: none"> • Coordinate with public transit operators in Birmingham, Montgomery, and Mobile to ensure effective integration of public transit with passenger rail. 	Authority set up in step 6	ADECA Local Governments BJCTA MATS The Wave



Appendix A – Additional Public Involvement Feedback

A.1 Write-In Answers from Online Survey

Questions 13 and 14 from the online survey gave respondents the option to write in specific responses that may not have been provided. The specific responses to those questions are provided below.

QUESTION 13 - What types of amenities should be offered on board while riding the train? Please choose three.

- "Beverage"
- "Drinking water and snacks for purchase"
- "Snacks"
- "Food car"
- "Preferably a "Daily" will have two trains making the circuit each way (two trains/day calling at stations). This short of a run would not need a full dining car, but an "observation" or "Club" car offering beverages, snacks, sandwiches, etc. An Amtrak two level Superliner would be awesome. "Airline" seats might mean different things to different people in todays air travel venues - so the typical Amtrak seating arrangements on a viewliner or Superliner (fairly roomy two by two), would be a minimum. Given lots of working travelers, seating with tables or having extra room for the fold down tray table for those still using laptops & paper (or to eat or rest one's head) would be a good amenity. Thank you for offering the opportunity to comment."
- "Good food availability "
- "Lounge"
- "café/snack bar"
- "food service"
- "food/snacks/water"
- "sleeper"
- "sleeper"
- "snack bar (breakfast)"
- "Café Car"
- "Dining car, observation car, sleeper car. Café car"
- "phone charger (USB) outlet"
- "Meals"
- "Vending options"
- "Seating should be more comfortable than airline seats. With more room for each passenger."
- "Snack Availability"
- "Snacks & Beverages"



QUESTION 14 - What other destinations would you be interested in traveling to by train?

- "Stops in Cullman"
- "AUBURN"
- "Opelika/Auburn"
- "Auburn-Opelika"
- "Chattanooga, Nashville as destinations. MOB-MGM intermediate station stops in Atmore, Evergreen, and possibly one or two others. Any chance to get up to/through Auburn/Opelika and then on to Atlanta? (War Eagle)"
- "Decatur / Cullman"
- "Nashville and Memphis"
- "Nashville"
- "cross country trips by train with stops at various locations for tours!!!!!!"
- "Memphis"
- "Orlando"
- "Auburn"
- "Nashville"
- "Savannah, GA"
- "Dothan"
- "Dothan, Muscle Shoals, Gulf shores"
- "Biloxi, MS"
- "Biloxi"
- "Asheville, NC"
- "Auburn"
- "Mobile"
- "GREENVILLE, ALABAMA"
- "Memphis Tennessee"
- "Oxford of Anniston, AL"
- "NONE"
- "Nashville/Knoxville"

A.2 Additional Comments from Online Survey

After completing the online survey, respondents were given an opportunity to leave longer comments. Those comments are included below.

- "No need to go to Mobile. It's the offer between Birmingham and Montgomery I am interested in. Even better would be from Huntsville, Cullman, Birmingham, Prattville/Montgomery."
- "I live in GA, would love a train at Opelika, to transit to work every day. "
- "I really hope that passenger rail is an option in Alabama. If need be, we may have to leave Mobile out and run the rail from Birmingham to Montgomery only."



- "It could benefit population in South Alabama who need jobs but don't have private transportation option."
- "Please get this done and add Birmingham. Birmingham to Atlanta would be wonderful as well."
- "Thank you for the effort in conducting this study. At a minimum, a daily service with two trains am/pm will make a viable offering - more frequency would be "better" as far as providing commuter or transit type flexibility in competitive transportation choice OR for those without access to personal vehicles. Likely as not, economic opportunities this service can bring to rural, underserved areas will not offset a very tall hurdle for the revenue generation needed to support operations. Infrastructure needs can be funded through rail grants, bonds (which require payback), etc., some of which will require match funding. Over time, a secure, high quality, dependable train service such as proposed here can become a strong economic driver and foundation for intra-state transportation. Obviously, "last-mile" connectivity is crucial to competing with a "my car can get me right there when I want" social structure. It will always require substantive financial support, as do our roads, highways and airports. Governance should look at the economic contribution to state revenue performance and capacity rather than a singular focus on the long-term operational costs. As a connection to interstate and other long distance transpo & travel, station location and/or transit connections is critical. Please keep up the good work!!"
- "I know that Mobile is having problems with the CSX rail lines and funding on their old passenger rail station. If Mobile is no longer a viable option, I believe that a Montgomery to Birmingham line should be the main focus, with additional stops in Prattville, Clanton, and Hoover."
- "Actually, I would be more interested in Mobile to B'ham area (Eva/Decatur). I am unable to visit my family do to physical difficulties and cannot make that drive. I would travel more if"
- "Please do this! Our state needs this desperately. Younger generations are multimodal and want more ways to get around then by car/traffic."
- "I believe it's a must to help relieve traffic congestion and help local economies and connect to other cities."
- "Let's get it done ASAP."
- "We need Amtrak in mobile"
- "It would help with recruiting businesses to Alabama and would help ease congestion."
- "Should also restart the New Orleans to Jacksonville route"
- "Let's get it going!!!!!!!!!!!!!!!!!!!!!!"
- "Would like at least one stop between the cities. Question 3: four responses selected - "business", "trips to doctor/hospital", "shopping", "leisure"."
- "I travel between Montgomery and Atmore 1-2 times/week. Needed for economic benefit. Needed for convenience. Needed for emergency evacuation. Needed for alternate transportation for elderly. Needed for cost efficiency for riders."
- "question 3: three responses chosen - "work", "business", and "leisure""
- "Would ride the train as often as possible. Rode as a child and loved it. question 3: selected two answers - "work" and "leisure""
- "Not at the moment!"
- "Traffic congestion or delays especially when traveling to Birmingham"
- "question 3: selected three - "business", "shopping", "leisure""
- "question 3: two options selected - "business" and "personal business""
- "I think it would benefit Alabama greatly!"



- "Question 3: two selected - "trips to doctor/hospital" and "leisure" Need to work hard to get it."
- "It would be an ideal means of travel to concert events when I do not wish to stay the night away from home."
- "Would be beneficial to this area."
- "Question 3: selected three responses - "work", "business", "leisure" The service would do well for tourists wanting to use the cruise terminal for cruises to/from Mobile. Also, coming to Montgomery when the Alabama legislature is in session - using the train as transportation would serve the legislators well - spend time on the train conversing with voters/lobbyists/staff/other legislators would serve the state well."
- "With a stop in Atmore, AL and Repton, AL or Evergreen, AL. Excited! Hope it works. Good example is the light rail in Portland, Oregon."
- "Question 3: selected two - "business" and "personal business""
- "Question 3: modified to select two - "work" and "personal business""
- "Question 1: response modified to 2-4 times/year question 3: two boxes checked - "personal business" and "leisure" Comment: "I could be more involved in my state government - attending public meetings, board meetings, etc." "
- "Mobile - Montgomery - Birmingham Good to hear Birmingham is part of this. It expands train travel by linking up with the Crescent."
- "This would be an incredible addition to the line from Atlanta to New Orleans! Alabama definitely needs more transportation options!!!"
- "Offer basic service to/from on a trial basis...add additional passenger cars as necessary."
- "would travel to sporting events and concerts that I would otherwise not travel to at all "
- "None at this time."
- "Hurry up with it."
- "I think River Region political leaders should seriously consider subsidizing this effort to whatever degree they can. A comprehensive transportation strategy must be a part of the functional and future growth planning of any progressive metropolitan area in this modern era. One of the stated reasons for Amazon's selection of New York and Washington was the existing transportation infrastructure. Rail transmit in the River region would be a game changer."
- "It should stop and pick up in Greenville, Evergreen, Atmore, Clanton, Alabaster, Homewood, UAB. Public transportation from train stops to throughout the cities."
- "This is something that needs to be available in AL. You have hundreds of baby boomers who will be needing reliable transportation especially to Birmingham and Mobile since UAB HOSPITAL is a specialty treatment facility. My husband and I travel to B'ham on a regular basis for scheduled visits with treatment teams not available in Montgomery AL. With age frequency will increase. We need this service. Thanks."
- "How will safety be a concern to the company for the passengers?"
- "Hurry up and finally DO THIS!"
- "Would like it to stop in Atmore"
- "I love train travel. I live in Montgomery now but previously I lived about 30 miles from Meridian, MS and took many train trips to New Orleans. Mobile is my favorite city in Alabama, but I don't go there as much as I would like because I65 is such a nightmare. I think this is a great idea."
- "How long would it take? Could you get off at other stops? When will this be available?"



- "Would be nice to have rail as an option for visits to North AL, and places such as Cheaha State Park and even up to the Great Smoky Mountains"
- "It would be a big waste of tax payer money! The existing rail lines are busy enough without passenger trains."
- "no."
- "I don't think enough people would ride it. The route needs to add cities with more population such as Atlanta, Birmingham, and New Orleans. I don't think a train could compete with the price, speed, and comfort provided by MegaBus for their routes between Mobile and Montgomery."
- "Not feasible"
- "We traveled to Montgomery at least 4 times a year back when Amtrack ran from Mobile to Birmingham. Perfect Sunday trip with brunch in downtown Montgomery."
- "Train service is too much cost on the tax payers. We don't need to subsidize any more. Look at California new rail service train. Billions and still not running."
- "Consider a connection to Pensacola and the Pensacola International Airport"



A.3 Comments from Public Involvement Open Houses



Birmingham-Montgomery-Mobile Intercity Passenger Rail Feasibility Study

Phase II: Montgomery to Mobile Public Information Meeting

COMMENT CARD

1. Do you support rail connecting Montgomery and Mobile? YES NO

2. Were your concerns and questions answered? YES NO

3. How did you hear about the public information meetings?

ADECA website Facebook Twitter

Newspaper Television Radio

Other, please list: wife

COMMENTS: _____

NAME: Commissioner Isaiah Sankey EMAIL: isaiah.sankey@gmail.com

ADDRESS: 313 Mildred Street Montgomery AL 36104
(if preferred method of communication.)

Please submit your comments to kathleen.rasmussen@adeca.alabama.gov or at:
Kathleen Rasmussen • PO Box 5690 • Montgomery, AL 36103-5690



Birmingham-Montgomery-Mobile Intercity Passenger Rail Feasibility Study

Phase II: Montgomery to Mobile Public Information Meeting

COMMENT CARD

1. Do you support rail connecting Montgomery and Mobile? YES NO

2. Were your concerns and questions answered? YES NO

3. How did you hear about the public information meetings?

ADECA website Facebook Twitter

Newspaper Television Radio

Other, please list: _____

COMMENTS: _____

NAME: PATRICK HAFT EMAIL: PATRICK.HAFT@SPIDERION.COM

ADDRESS: 4001 COMMERCIAL ROAD Ste. 310 MONTGOMERY, AL 36106
(if preferred method of communication.)

Please submit your comments to kathleen.rasmussen@adeca.alabama.gov or at:
Kathleen Rasmussen • PO Box 5690 • Montgomery, AL 36103-5690





ADECA
building better alabama communities
Alabama Department of Economic and Community Affairs

Birmingham-Montgomery-Mobile Intercity Passenger Rail Feasibility Study

Phase II: Montgomery to Mobile Public Information Meeting

COMMENT CARD

1. Do you support rail connecting Montgomery and Mobile? YES NO
2. Were your concerns and questions answered? YES NO
3. How did you hear about the public information meetings?

<input type="checkbox"/> ADECA website	<input type="checkbox"/> Facebook	<input type="checkbox"/> Twitter
<input type="checkbox"/> Newspaper	<input type="checkbox"/> Television	<input type="checkbox"/> Radio
<input type="checkbox"/> Other, please list: <u>Word of mouth</u>		

COMMENTS: _____

NAME: Patrick Miller EMAIL: _____

ADDRESS: PO BOX 165, Loachapoka, AL
(if preferred method of communication)

Please submit your comments to kathleen.rasmussen@adeca.alabama.gov or at:
Kathleen Rasmussen • PO Box 5690 • Montgomery, AL 36103-5690



ADECA
building better alabama communities
Alabama Department of Economic and Community Affairs

Birmingham-Montgomery-Mobile Intercity Passenger Rail Feasibility Study

Phase II: Montgomery to Mobile Public Information Meeting

COMMENT CARD

1. Do you support rail connecting Montgomery and Mobile? YES NO
2. Were your concerns and questions answered? YES NO
3. How did you hear about the public information meetings?

<input type="checkbox"/> ADECA website	<input checked="" type="checkbox"/> Facebook	<input type="checkbox"/> Twitter
<input type="checkbox"/> Newspaper	<input checked="" type="checkbox"/> Television	<input type="checkbox"/> Radio
<input type="checkbox"/> Other, please list: _____		

COMMENTS: I think the possibility of a rail service in Montgomery is exciting. I would hope that plenty of public transportation options are available in Montgomery or Mobile so you reach your destination.

NAME: MICHAEL HORA EMAIL: HORAMIL@YAHOO.COM

ADDRESS: 661 Williamson Road Montgomery, AL 36109
(if preferred method of communication)

Please submit your comments to kathleen.rasmussen@adeca.alabama.gov or at:
Kathleen Rasmussen • PO Box 5690 • Montgomery, AL 36103-5690



COMMENT CARD

Birmingham-Montgomery-Mobile Intercity Passenger Rail Feasibility Study
Phase II: Montgomery to Mobile
Public Information Meeting

 **ADECA**
building better alabama communities
Alabama Department of Economic and Community Affairs

1. Do you support rail connecting Montgomery and Mobile? YES NO

2. Were your concerns and questions answered? YES NO

3. How did you hear about the public information meetings?

ADECA website Facebook Twitter
 Newspaper Television Radio
 Other, please list: _____

COMMENTS: Think this will be great for Montgomery +
Central + South Alabama. I think this may also
encourage your local transit to improve.

NAME: Sandrina Vaughn EMAIL: sandrina.vaughn@gmail.com

ADDRESS: _____
(if preferred method of communication.)

Please submit your comments to kathleen.rasmussen@adeca.alabama.gov or at:
Kathleen Rasmussen • PO Box 5690 • Montgomery, AL 36103-5690

COMMENT CARD

Birmingham-Montgomery-Mobile Intercity Passenger Rail Feasibility Study
Phase II: Montgomery to Mobile
Public Information Meeting

 **ADECA**
building better alabama communities
Alabama Department of Economic and Community Affairs

1. Do you support rail connecting Montgomery and Mobile? YES NO

2. Were your concerns and questions answered? YES NO

3. How did you hear about the public information meetings?

ADECA website Facebook Twitter
 Newspaper Television Radio
 Other, please list: boss

COMMENTS: _____

NAME: Kitty Chamberlain EMAIL: kchamberlain@
montgomeryal.gov

ADDRESS: _____
(if preferred method of communication.)

Please submit your comments to kathleen.rasmussen@adeca.alabama.gov or at:
Kathleen Rasmussen • PO Box 5690 • Montgomery, AL 36103-5690



COMMENT CARD

Birmingham-Montgomery-Mobile Intercity Passenger Rail Feasibility Study
Phase II: Montgomery to Mobile
Public Information Meeting

ADECA
building better alabama communities
 Alabama Department of Economic and Community Affairs

1. Do you support rail connecting Montgomery and Mobile? YES NO

2. Were your concerns and questions answered? YES NO

3. How did you hear about the public information meetings?

ADECA website Facebook Twitter
 Newspaper Television Radio
 Other, please list: _____

COMMENTS: _____

NAME: Herbert Pair EMAIL: pairprinting@aol.com
 ADDRESS: 357 Congress St. Mobile, AL 36608
(if preferred method of communication.)

Please submit your comments to kathleen.rasmussen@adeca.alabama.gov or at:
 Kathleen Rasmussen • PO Box 5690 • Montgomery, AL 36103-5690

COMMENT CARD

Birmingham-Montgomery-Mobile Intercity Passenger Rail Feasibility Study
Phase II: Montgomery to Mobile
Public Information Meeting

ADECA
building better alabama communities
 Alabama Department of Economic and Community Affairs

1. Do you support rail connecting Montgomery and Mobile? YES NO

2. Were your concerns and questions answered? YES NO

3. How did you hear about the public information meetings?

ADECA website Facebook Twitter
 Newspaper Television Radio
 Other, please list: _____

COMMENTS: Good information but limited by state government. Until the politics of Montgomery change (Hay Ivey), not sure if this is viable.

NAME: Jerry Gehman EMAIL: NOFLINE@GMAIL.COM
 ADDRESS: 3532 Hwy 31 Atmore AL 36502
(if preferred method of communication.)

Please submit your comments to kathleen.rasmussen@adeca.alabama.gov or at:
 Kathleen Rasmussen • PO Box 5690 • Montgomery, AL 36103-5690





Birmingham-Montgomery-Mobile Intercity Passenger Rail Feasibility Study Phase II: Montgomery to Mobile Public Information Meeting

COMMENT CARD

1. Do you support rail connecting Montgomery and Mobile?

YES NO

2. Were your concerns and questions answered?

YES NO

but not much details yet

3. How did you hear about the public information meetings?

ADECA website

Facebook

Twitter

Newspaper

Television

Radio

Other, please list: _____

COMMENTS: _____

NAME: Lella Lowe

EMAIL: rollread@bellsouth.net

ADDRESS: 2609 Shay Ct, Mobile, AL 36695
(If preferred method of communication.)

Please submit your comments to kathleen.rasmussen@adeca.alabama.gov or at:
Kathleen Rasmussen • PO Box 5690 • Montgomery, AL 36103-5690



Birmingham-Montgomery-Mobile Intercity Passenger Rail Feasibility Study Phase II: Montgomery to Mobile Public Information Meeting

COMMENT CARD

1. Do you support rail connecting Montgomery and Mobile?

YES NO

2. Were your concerns and questions answered?

YES NO

3. How did you hear about the public information meetings?

ADECA website

Facebook

Twitter

Newspaper

Television

Radio

Other, please list: _____

COMMENTS: _____

NAME: KEVIN HARRISON

EMAIL: Kharrison@sarpc.org

ADDRESS: SARPC 110 BEAUREGARD ST 207 MOBILE, AL 36602
(If preferred method of communication.)

Please submit your comments to kathleen.rasmussen@adeca.alabama.gov or at:
Kathleen Rasmussen • PO Box 5690 • Montgomery, AL 36103-5690





Birmingham-Montgomery-Mobile Intercity Passenger Rail Feasibility Study Phase II: Montgomery to Mobile Public Information Meeting

COMMENT CARD

1. Do you support rail connecting Montgomery and Mobile? YES NO
2. Were your concerns and questions answered? YES NO
3. How did you hear about the public information meetings?
 - ADECA website
 - Newspaper
 - Other, please list: Friend
 - Facebook
 - Television
 - Twitter
 - Radio

COMMENTS: I am looking forward to seeing what sort of technology that will be brought to the state.

NAME: _____ EMAIL: Andrew.gamer@atm.mred.com

ADDRESS: _____
(If preferred method of communication.)

Please submit your comments to kathleen.rasmussen@adeca.alabama.gov or at:
Kathleen Rasmussen • PO Box 5690 • Montgomery, AL 36103-5690



Birmingham-Montgomery-Mobile Intercity Passenger Rail Feasibility Study Phase II: Montgomery to Mobile Public Information Meeting

COMMENT CARD

1. Do you support rail connecting Montgomery and Mobile? YES NO
2. Were your concerns and questions answered? YES NO
3. How did you hear about the public information meetings?
 - ADECA website
 - Newspaper
 - Other, please list: _____
 - Facebook
 - Television
 - Twitter
 - Radio

COMMENTS: _____

NAME: Brenda DeRamos - Coleman EMAIL: bdc0006@gmail.com

ADDRESS: 2976 Milton Road Montgomery, AL 36110
(If preferred method of communication.)

Please submit your comments to kathleen.rasmussen@adeca.alabama.gov or at:
Kathleen Rasmussen • PO Box 5690 • Montgomery, AL 36103-5690



COMMENT CARD

Birmingham-Montgomery-Mobile Intercity Passenger Rail Feasibility Study
Phase II: Montgomery to Mobile
Public Information Meeting

 **ADECA**
building better alabama communities
Alabama Department of Economic and Community Affairs

1. Do you support rail connecting Montgomery and Mobile? YES NO

2. Were your concerns and questions answered? YES NO

3. How did you hear about the public information meetings?

ADECA website Facebook Twitter
 Newspaper Television Radio
 Other, please list: Friend

COMMENTS: _____

NAME: _____ EMAIL: _____

ADDRESS: _____
(If preferred method of communication.)

Please submit your comments to kathleen.rasmussen@adeca.alabama.gov or at:
Kathleen Rasmussen • PO Box 5690 • Montgomery, AL 36103-5690

COMMENT CARD

Birmingham-Montgomery-Mobile Intercity Passenger Rail Feasibility Study
Phase II: Montgomery to Mobile
Public Information Meeting

 **ADECA**
building better alabama communities
Alabama Department of Economic and Community Affairs

1. Do you support rail connecting Montgomery and Mobile? YES NO

2. Were your concerns and questions answered? YES NO

3. How did you hear about the public information meetings?

ADECA website Facebook Twitter
 Newspaper Television Radio
 Other, please list: EMAIL

COMMENTS: THIS WAS AWESOME!

NAME: PHOENIX ROBINSON EMAIL: PROBINSON@CARPC
CONA

ADDRESS: _____
(If preferred method of communication.)

Please submit your comments to kathleen.rasmussen@adeca.alabama.gov or at:
Kathleen Rasmussen • PO Box 5690 • Montgomery, AL 36103-5690





Birmingham-Montgomery-Mobile Intercity Passenger Rail Feasibility Study Phase II: Montgomery to Mobile Public Information Meeting

1. Do you support rail connecting Montgomery and Mobile? YES NO
2. Were your concerns and questions answered? YES NO
3. How did you hear about the public information meetings?
- ADECA website Facebook Twitter
- Newspaper Television Radio
- Other, please list: _____

COMMENTS: _____

NAME: Toby Roth EMAIL: troth@capitolresourcesllc.com

ADDRESS: 2472 Rosemont Pl., Montz, AL 36006

(If preferred method of communication.)

Please submit your comments to kathleen.rasmussen@adeca.alabama.gov or at:
Kathleen Rasmussen • PO Box 5690 • Montgomery, AL 36103-5690

COMMENT CARD



Birmingham-Montgomery-Mobile Intercity Passenger Rail Feasibility Study Phase II: Montgomery to Mobile Public Information Meeting

1. Do you support rail connecting Montgomery and Mobile? YES NO
2. Were your concerns and questions answered? YES NO
3. How did you hear about the public information meetings?
- ADECA website Facebook Twitter
- Newspaper Television Radio
- Other, please list: City Council

COMMENTS: _____

NAME: Sandra Gray EMAIL: mrsgray1954@yahoo.com

ADDRESS: _____

(If preferred method of communication.)

Please submit your comments to kathleen.rasmussen@adeca.alabama.gov or at:
Kathleen Rasmussen • PO Box 5690 • Montgomery, AL 36103-5690

COMMENT CARD



Birmingham-Montgomery-Mobile Intercity Passenger Rail Feasibility Study
Phase II: Montgomery to Mobile
Public Information Meeting

ADECA
Building better alabama communities
Alabama Department of Economic and Community Affairs

1. Do you support rail connecting Montgomery and Mobile? YES NO

2. Were your concerns and questions answered? YES NO

3. How did you hear about the public information meetings?

ADECA website Facebook Twitter
 Newspaper Television Radio
 Other, please list: _____

COMMENTS: I hope this happens

NAME: John Lowe EMAIL: jlowe58@we.com

ADDRESS: _____
(If preferred method of communication.)

Please submit your comments to kathleen.rasmussen@adeca.alabama.gov or at:
Kathleen Rasmussen • PO Box 5690 • Montgomery, AL 36103-5690

COMMENT CARD

Birmingham-Montgomery-Mobile Intercity Passenger Rail Feasibility Study
Phase II: Montgomery to Mobile
Public Information Meeting

ADECA
Building better alabama communities
Alabama Department of Economic and Community Affairs

1. Do you support rail connecting Montgomery and Mobile? YES NO

2. Were your concerns and questions answered? YES NO

3. How did you hear about the public information meetings?

ADECA website Facebook Twitter
 Newspaper Television Radio
 Other, please list: _____

COMMENTS: _____

NAME: PELL BROWN EMAIL: VGNR4EL3A@AOL.Gm

ADDRESS: 1637 NORWICH CT Mobile, AL 36695
(If preferred method of communication.)

Please submit your comments to kathleen.rasmussen@adeca.alabama.gov or at:
Kathleen Rasmussen • PO Box 5690 • Montgomery, AL 36103-5690

COMMENT CARD





Birmingham-Montgomery-Mobile Intercity Passenger Rail Feasibility Study Phase II: Montgomery to Mobile Public Information Meeting

COMMENT CARD

1. Do you support rail connecting Montgomery and Mobile? YES NO
2. Were your concerns and questions answered? YES NO
3. How did you hear about the public information meetings?
- | | | |
|---|-------------------------------------|----------------------------------|
| <input type="checkbox"/> ADECA website | <input type="checkbox"/> Facebook | <input type="checkbox"/> Twitter |
| <input checked="" type="checkbox"/> Newspaper | <input type="checkbox"/> Television | <input type="checkbox"/> Radio |
| <input checked="" type="checkbox"/> Other, please list: <u>Robert Smith</u> | | |

COMMENTS: _____

NAME: SUSAN SMITH EMAIL: susmith@mchsi.com
ADDRESS: 101 FERNWAY DR., ATMORE, AL. 36502
(If preferred method of communication.)

Please submit your comments to kathleen.rasmussen@adeca.alabama.gov or at:
Kathleen Rasmussen • PO Box 5690 • Montgomery, AL 36103-5690



Birmingham-Montgomery-Mobile Intercity Passenger Rail Feasibility Study Phase II: Montgomery to Mobile Public Information Meeting

COMMENT CARD

1. Do you support rail connecting Montgomery and Mobile? YES NO
2. Were your concerns and questions answered? YES NO
3. How did you hear about the public information meetings?
- | | | |
|--|-------------------------------------|----------------------------------|
| <input type="checkbox"/> ADECA website | <input type="checkbox"/> Facebook | <input type="checkbox"/> Twitter |
| <input checked="" type="checkbox"/> Newspaper | <input type="checkbox"/> Television | <input type="checkbox"/> Radio |
| <input type="checkbox"/> Other, please list: _____ | | |

COMMENTS: I'm all for this

NAME: Robert Mays EMAIL: robw@2w2exp.com
ADDRESS: 1111 S. PRESLEY ST ATMORE, AL 36507
(If preferred method of communication.)

Please submit your comments to kathleen.rasmussen@adeca.alabama.gov or at:
Kathleen Rasmussen • PO Box 5690 • Montgomery, AL 36103-5690





Birmingham-Montgomery-Mobile Intercity Passenger Rail Feasibility Study

Phase II: Montgomery to Mobile Public Information Meeting

COMMENT CARD

1. Do you support rail connecting Montgomery and Mobile? YES NO
2. Were your concerns and questions answered? YES NO
3. How did you hear about the public information meetings?
- ADECA website Facebook Twitter
- Newspaper Television Radio
- Other, please list: _____

COMMENTS: _____
_____ CHILTON COUNTY CHAMBER BOARD PRESIDENT

NAME: BRAD CARTER EMAIL: tcarter10@gmail.com

ADDRESS: _____
(If preferred method of communication.)

Please submit your comments to kathleen.rasmussen@adeca.alabama.gov or at:
Kathleen Rasmussen • PO Box 5690 • Montgomery, AL 36103-5690



Birmingham-Montgomery-Mobile Intercity Passenger Rail Feasibility Study

Phase II: Montgomery to Mobile Public Information Meeting

COMMENT CARD

1. Do you support rail connecting Montgomery and Mobile? YES NO
2. Were your concerns and questions answered? YES NO
3. How did you hear about the public information meetings?
- ADECA website Facebook Twitter
- Newspaper Television Radio
- Other, please list: Mayor Jim Staff

COMMENTS: _____

NAME: Blandin Smith EMAIL: napa370atmore@gmail.com

ADDRESS: P.O. Box 337 Admore, AL 36504
(If preferred method of communication.)

Please submit your comments to kathleen.rasmussen@adeca.alabama.gov or at:
Kathleen Rasmussen • PO Box 5690 • Montgomery, AL 36103-5690



A.4 Comments from Draft Report Public Comment Period



Kay Ivey
Governor

ALABAMA DEPARTMENT OF TRANSPORTATION

1409 Coliseum Boulevard
Montgomery, Alabama 36110

Telephone: (334) 242-6311 • Fax No.: (334) 262-8041



John R. Cooper
Transportation Director

November 19, 2019

Dr. Kathleen Rasmussen
Alabama Department of
Economic and Community Affairs
P. O. Box 5690
Montgomery, Alabama 36103-5690

RE: State of Alabama's Passenger Rail Feasibility Study:
Phase 2 – Montgomery to Mobile Route

Dear Dr. Rasmussen:

Reference is made to the recently released Phase 2 study of the feasibility of passenger rail service between Montgomery and Mobile as well as the previous (Phase 1) study from Birmingham to Montgomery.

We object to any railroad tracks that would be located within the median of any interstate highway in the state of Alabama. Any railroad track or tracks located within the median at or above existing grade would prevent ALDOT from adding roadway lanes to the inside of existing roadway lanes. The construction of any track or tracks located below the existing grade would be very disruptive to interstate highway traffic during the construction phase. In addition, wherever the rail tracks entered or exited the interstate median, cut and cover (tunnels) or overhead (bridge) structures would be required. Those features would create significant problems for the interstate system as well. Please let it be known that ALDOT is opposed to the use of any of our right-of-way for the purpose of any railroad construction.

Sincerely,

A handwritten signature in blue ink, appearing to read "Don T. Arkle".

Don T. Arkle, P.E.
Chief Engineer

DTA\WFA\SEW\gm
c: Mr. Steve Walker, P.E.



Appendix B – Rail Crossing Information

MILE POST	MIN SPEED (MPH)	MAX SPEED (MPH)	GRADE CROSSING	CROSSING TYPE	PROTECTION TYPE	COUNTY	CITY	STREET	DAILY THRU TRAINS (6AM - 6PM)	NIGHT THRU TRAINS (6PM - 6AM)	TOTAL DAILY TRAINS	AADT VOLUMES
488.20	25	30	RR UNDER	PUBLIC	NONE	MONTGOMERY	MONTGOMERY	PEDESTRIAN WLKWY	10	10	20	
488.70	25	30	RR UNDER	PUBLIC	FLASHING LIGHTS	MONTGOMERY	MONTGOMERY	I-65	8	7	15	1
488.82	25	30	RR UNDER	PUBLIC	FLASHING LIGHTS	MONTGOMERY	MONTGOMERY	MAXWELL BLVD	8	7	15	1
489.65	45	50	RR UNDER	PUBLIC	FLASHING LIGHTS	MONTGOMERY	MONTGOMERY	DAY ST	8	7	15	1
490.42	55	60	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	MONTGOMERY	MONTGOMERY	TERMINAL RD	7	5	12	2310
491.10	55	60	RR UNDER	PUBLIC	NONE	MONTGOMERY	MONTGOMERY	PEDESTRIAN WLKWY	7	7	14	
491.19	55	60	RR UNDER	PUBLIC	FLASHING LIGHTS	MONTGOMERY	MONTGOMERY	AIR BASE BLVD	7	7	14	1
492.52	55	60	RR UNDER	PUBLIC	FLASHING LIGHTS	MONTGOMERY	MONTGOMERY	SOUTH BLVD	7	7	14	1
493.85	55	60	RR UNDER	PUBLIC	FLASHING LIGHTS	MONTGOMERY	MONTGOMERY	US 80/ SR 0008/ SELMA HWY	7	8	15	1
496.91	10	10	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	MONTGOMERY	MONTGOMERY	WASDEN RD	6	7	13	2820
498.34	60	60	AT GRADE	PUBLIC	CROSSBUCKS	MONTGOMERY	MONTGOMERY	W MCLEAN RD	5	5	10	100
499.94	60	60	AT GRADE	PRIVATE	CROSSBUCKS	MONTGOMERY	MONTGOMERY	PRIVATE	6	6	12	
500.59	60	60	AT GRADE	PUBLIC	CROSSBUCKS	MONTGOMERY	MONTGOMERY	GEORGE DR	5	5	10	30
501.53	60	60	AT GRADE	PRIVATE	CROSSBUCKS	LOWNDES	MONTGOMERY	PRIVATE ROAD	6	6	12	
502.98	60	60	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	LOWNDES	MONTGOMERY	TYSON RD	5	5	10	2340
503.83	45	79	AT GRADE	PRIVATE	NONE	LOWNDES	MONTGOMERY		7	7	14	
504.99	60	60	AT GRADE	PRIVATE	CROSSBUCKS	LOWNDES	MONTGOMERY	PRIVATE	7	6	13	
506.05	60	60	AT GRADE	PRIVATE	CROSSBUCKS	LOWNDES	MONTGOMERY	PRIVATE	7	6	13	
508.59	55	60	RR UNDER	PUBLIC	FLASHING LIGHTS	LOWNDES	FORT DEPOSIT	SR 97	7	8	15	1
510.15	60	60	AT GRADE	PRIVATE	CROSSBUCKS	LOWNDES	FORT DEPOSIT	PRIVATE	7	6	13	
510.53	60	60	AT GRADE	PRIVATE	CROSSBUCKS	LOWNDES	FORT DEPOSIT	PRIVATE RD	7	6	13	

MILE POST	MIN SPEED (MPH)	MAX SPEED (MPH)	GRADE CROSSING	CROSSING TYPE	PROTECTION TYPE	COUNTY	CITY	STREET	DAILY THRU TRAINS (6AM - 6PM)	NIGHT THRU TRAINS (6PM - 6AM)	TOTAL DAILY TRAINS	AADT VOLUMES
515.17	25	60	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	LOWNDES	FORT DEPOSIT	BISHOP BOTTOM RD	5	5	10	110
517.45	45	50	RR UNDER	PUBLIC	FLASHING LIGHTS	LOWNDES	FORT DEPOSIT	CR 37	7	8	15	1
518.83	50	50	AT GRADE	PRIVATE	CROSSBUCKS	LOWNDES	FORT DEPOSIT	PRIVATE ROAD	6	6	12	
520.31	45	50	RR UNDER	PUBLIC	FLASHING LIGHTS	LOWNDES	FORT DEPOSIT	SR 185	7	8	15	1
520.48	50	50	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	LOWNDES	FORT DEPOSIT	JONES ST	6	7	13	340
520.56	50	50	AT GRADE	PUBLIC	FLASHING LIGHTS	LOWNDES	FORT DEPOSIT	ROGERS ST	6	7	13	190
520.95	50	50	AT GRADE	PUBLIC	CROSSBUCKS	LOWNDES	FORT DEPOSIT	S POLLARD ST	5	4	9	60
522.05	50	50	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	BUTLER	FORT DEPOSIT	PORTERFIELD RD	6	7	13	800
531.96	45	50	RR UNDER	PUBLIC	FLASHING LIGHTS	BUTLER	GREENVILLE	FORT DALE RD	7	7	14	1
528.98	45	50	RR UNDER	PUBLIC	FLASHING LIGHTS	BUTLER	GREENVILLE	I-65	7	8	15	1
530.90	45	50	RR UNDER	PUBLIC	FLASHING LIGHTS	BUTLER	GREENVILLE	SR 245	7	7	14	1
531.96	45	50	RR UNDER	PUBLIC	FLASHING LIGHTS	BUTLER	GREENVILLE	FORT DALE RD	7	7	14	1
532.15	45	50	RR OVER	PUBLIC	FLASHING LIGHTS	BUTLER	GREENVILLE	COMMERCE ST	7	7	14	1
532.46	45	50	RR UNDER	PUBLIC	FLASHING LIGHTS	BUTLER	GREENVILLE	S COLLEGE ST	7	7	14	1
532.93	40	50	AT GRADE	PUBLIC	CROSSBUCKS	BUTLER	GREENVILLE		6	6	12	24
534.45	60	60	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	BUTLER	GREENVILLE	KOLB CITY RD	4	6	10	1110
537.58	50	50	AT GRADE	PUBLIC	CROSSBUCKS	BUTLER	GREENVILLE	PETTIBONE RD / CR 30	5	4	9	490
538.68	50	50	AT GRADE	PUBLIC	CROSSBUCKS	BUTLER	GREENVILLE	VALE LN	5	4	9	40
540.86	50	50	AT GRADE	PUBLIC	CROSSBUCKS	BUTLER	GREENVILLE	SOLOMAN HILL RD / CR 28	5	4	9	190
544.76	45	50	RR UNDER	PUBLIC	FLASHING LIGHTS	BUTLER	GEORGIANA	W DOGWWOD TRL	8	7	15	1
545.52	50	50	AT GRADE	PUBLIC	CROSSBUCKS	BUTLER	GEORGIANA	RIPLEY RD	5	5	10	50
545.90	50	50	AT GRADE	PUBLIC	FLASHING LIGHTS	BUTLER	GEORGIANA	N RAILROAD AVE	6	7	13	180
546.58	45	70	AT GRADE	PRIVATE	NONE	BUTLER	GEORGIANA	PRIVATE RD.	17	10	27	

MILE POST	MIN SPEED (MPH)	MAX SPEED (MPH)	GRADE CROSSING	CROSSING TYPE	PROTECTION TYPE	COUNTY	CITY	STREET	DAILY THRU TRAINS (6AM - 6PM)	NIGHT THRU TRAINS (6PM - 6AM)	TOTAL DAILY TRAINS	AADT VOLUMES
546.76	45	50	RR UNDER	PUBLIC	FLASHING LIGHTS	BUTLER	GEORGIANA	SR 106	8	7	15	1
547.07	50	50	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	BUTLER	GEORGIANA	ROSE ST	5	5	10	730
547.25	25	40	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	BUTLER	GEORGIANA	MILL ST	6	5	11	2130
547.34	35	40	AT GRADE	PUBLIC	NONE	BUTLER	GEORGIANA	PEDESTRIAN PATHWAY	7	8	15	
547.90	45	50	RR UNDER	PUBLIC	FLASHING LIGHTS	BUTLER	GEORGIANA	SR 55	9	9	18	
550.23	55	60	AT GRADE	PRIVATE	FLASHING LIGHTS	BUTLER	GEORGIANA	PRIVATE ROAD	6	6	12	
554.65	45	50	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	BUTLER	MCKENZIE	CR 8	6	6	12	330
560.48	25	50	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	CONECUH	EVERGREEN	WILCOX ROAD	4	5	9	60
563.92	50	50	AT GRADE	PUBLIC	FLASHING LIGHTS	CONECUH	EVERGREEN	CR 22	6	7	13	580
564.77	50	50	AT GRADE	PRIVATE	CROSSBUCKS	CONECUH	EVERGREEN	PRIVATE	6	6	12	
565.44	50	50	AT GRADE	PRIVATE	CROSSBUCKS	CONECUH	EVERGREEN	PRIVATE ROAD	6	6	12	
565.78	50	50	AT GRADE	PUBLIC	CROSSBUCKS	CONECUH	EVERGREEN	JERUSALEM CHURCH RD	5	4	9	20
566.73	50	50	AT GRADE	PUBLIC	FLASHING LIGHTS	CONECUH	EVERGREEN	WILLY ROGERS RD	6	7	13	170
567.71	50	50	AT GRADE	PUBLIC	FLASHING LIGHTS	CONECUH	EVERGREEN	N MAIN ST	6	7	13	3560
568.31	40	45	RR UNDER	PUBLIC	FLASHING LIGHTS	CONECUH	EVERGREEN	US 84/SR 3	7	7	14	1
568.44	45	45	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	CONECUH	EVERGREEN	RURAL ST	6	7	13	2400
568.53	45	45	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	CONECUH	EVERGREEN	DEPOT ST	6	7	13	2670
568.82	10	45	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	CONECUH	EVERGREEN	BELLVILLE ST	5	4	9	2890
569.17	10	50	AT GRADE	PRIVATE	CROSSBUCKS	CONECUH	EVERGREEN	PRIVATE ROAD	6	6	12	
569.69	50	50	AT GRADE	PRIVATE	CROSSBUCKS	CONECUH	EVERGREEN	PRIVATE	6	6	12	
571.10	55	60	AT GRADE	PRIVATE	NONE	CONECUH	EVERGREEN	PRIVATE	7	7	14	

MILE POST	MIN SPEED (MPH)	MAX SPEED (MPH)	GRADE CROSSING	CROSSING TYPE	PROTECTION TYPE	COUNTY	CITY	STREET	DAILY THRU TRAINS (6AM - 6PM)	NIGHT THRU TRAINS (6PM - 6AM)	TOTAL DAILY TRAINS	AADT VOLUMES
571.72	45	79	AT GRADE	PRIVATE	NONE	CONECUH	EVERGREEN		8	7	15	
574.57	50	50	AT GRADE	PRIVATE	CROSSBUCKS	CONECUH	EVERGREEN	PRIVATE ROAD	6	6	12	
574.95	45	50	AT GRADE	PRIVATE	NONE	CONECUH	EVERGREEN	PRIVATE RD.	7	8	15	
575.43	60	60	AT GRADE	PRIVATE	CROSSBUCKS	CONECUH	EVERGREEN	PRIVATE ROAD	6	6	12	
579.07	25	60	AT GRADE	PUBLIC	FLASHING LIGHTS	CONECUH	CASTLEBERRY	CLEVELAND AVE	5	5	10	1340
579.34	25	60	AT GRADE	PUBLIC	CROSSBUCKS	CONECUH	CASTLEBERRY	HOLLAND ST / PRICE ST	5	4	9	70
579.56	40	60	AT GRADE	PUBLIC	CROSSBUCKS	CONECUH	CASTLEBERRY		6	6	12	24
579.99	55	60	AT GRADE	PRIVATE	NONE	CONECUH	CASTLEBERRY	PRIVATE RD.	8	11	19	
580.88	45	79	AT GRADE	PRIVATE	NONE	CONECUH	CASTLEBERRY		7	7	14	
581.61	60	60	AT GRADE	PRIVATE	CROSSBUCKS	CONECUH	CASTLEBERRY	PRIVATE ROAD	6	6	12	
586.68	60	60	AT GRADE	PUBLIC	CROSSBUCKS	ESCAMBIA	BREWTON	MURDER CREEK RD	5	4	9	60
586.86	60	60	AT GRADE	PRIVATE	CROSSBUCKS	ESCAMBIA	BREWTON	PRIVATE ROAD	6	6	12	
591.46	60	60	AT GRADE	PUBLIC	CROSSBUCKS	ESCAMBIA	BREWTON	COOK RD	5	4	9	20
592.12	60	60	AT GRADE	PUBLIC	CROSSBUCKS	ESCAMBIA	BREWTON	JONES ST	5	4	9	60
592.55	40	50	AT GRADE	PUBLIC	CROSSBUCKS	ESCAMBIA	BREWTON	GRANBERRY	6	6	12	42
592.84	25	60	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	BREWTON	E MCLELLAN ST	4	6	10	450
593.08	10	30	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	BREWTON	EAST ST	6	7	13	750
593.38	30	30	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	BREWTON	DEER ST	5	5	10	1680
593.47	30	30	AT GRADE	PUBLIC	CROSSBUCKS	ESCAMBIA	BREWTON	LEE ST	5	4	9	6960
593.55	30	30	AT GRADE	PUBLIC	FLASHING LIGHTS	ESCAMBIA	BREWTON	MILDRED ST/SR15/SR41/ US29	5	4	9	16690
593.83	55	60	RR OVER	PUBLIC	FLASHING LIGHTS	ESCAMBIA	BREWTON	ANN ST	8	8	16	1
595.20	60	60	AT GRADE	PRIVATE	CROSSBUCKS	ESCAMBIA	BREWTON	PRIVATE ROAD	6	6	12	
596.80	60	60	AT GRADE	PRIVATE	CROSSBUCKS	ESCAMBIA	BREWTON	PRIVATE ROAD	6	6	12	

MILE POST	MIN SPEED (MPH)	MAX SPEED (MPH)	GRADE CROSSING	CROSSING TYPE	PROTECTION TYPE	COUNTY	CITY	STREET	DAILY THRU TRAINS (6AM - 6PM)	NIGHT THRU TRAINS (6PM - 6AM)	TOTAL DAILY TRAINS	AADT VOLUMES
597.94	10	60	AT GRADE	PRIVATE	CROSSBUCKS	ESCAMBIA	BREWTON	PRIVATE ROAD	6	6	12	
598.30	10	60	AT GRADE	PRIVATE	CROSSBUCKS	ESCAMBIA	BREWTON	PRIVATE ROAD	6	6	12	50
598.77	60	60	AT GRADE	PRIVATE	CROSSBUCKS	ESCAMBIA	BREWTON	PRIVATE ROAD	6	6	12	
600.74	60	60	AT GRADE	PRIVATE	CROSSBUCKS	ESCAMBIA	BREWTON	PRIVATE ROAD	6	6	12	
601.02	60	60	AT GRADE	PUBLIC	CROSSBUCKS	ESCAMBIA	POLLARD	BOLIVAR ST	4	6	10	20
601.14	60	60	AT GRADE	PUBLIC	CROSSBUCKS	ESCAMBIA	POLLARD	SHILOH STREET	4	6	10	
601.46	60	60	AT GRADE	PUBLIC	CROSSBUCKS	ESCAMBIA	POLLARD	CANTERBERRY ST	4	6	10	40
601.53	60	60	AT GRADE	PUBLIC	CROSSBUCKS	ESCAMBIA	POLLARD	MISELLA ST	4	6	10	80
601.60	60	60	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	POLLARD	ELIZABETH AVE	5	6	11	90
601.77	60	60	AT GRADE	PUBLIC	CROSSBUCKS	ESCAMBIA	POLLARD	LOUISVILLE ST	4	6	10	30
603.43	45	60	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	FLOMATON	WELKA RD	5	6	11	20
604.22	45	60	AT GRADE	PUBLIC	CROSSBUCKS	ESCAMBIA	FLOMATON	HOLLYWOOD DR	5	4	9	20
604.80	45	60	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	FLOMATON	FANNIE RD	5	5	10	870
605.34	45	60	AT GRADE	PRIVATE	CROSSBUCKS	ESCAMBIA	FLOMATON	PRIVATE ROAD	6	6	12	
605.86	30	30	AT GRADE	PUBLIC	CROSSBUCKS	ESCAMBIA	FLOMATON	DIXON RD	5	4	9	40
607.10	10	30	AT GRADE	PUBLIC	FLASHING LIGHTS	ESCAMBIA	FLOMATON	PALAFX ST	7	9	16	670
607.26	25	30	RR UNDER	PUBLIC	FLASHING LIGHTS	ESCAMBIA	FLOMATON	US 29	9	9	18	1
607.89	45	50	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	FLOMATON	COLLEGE ST	6	7	13	1060
608.76	45	50	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	FLOMATON	LAMBETH RD	8	6	14	20
612.79	50	50	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	FLOMATON	OLD ATMORE RD	8	6	14	630
613.33	25	79	AT GRADE	PRIVATE	FLASHING LIGHTS	ESCAMBIA	FLOMATON	PRIVATE ROAD	6	7	13	
613.74	10	79	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	FLOMATON	SAM JONES RD	7	7	14	90

MILE POST	MIN SPEED (MPH)	MAX SPEED (MPH)	GRADE CROSSING	CROSSING TYPE	PROTECTION TYPE	COUNTY	CITY	STREET	DAILY THRU TRAINS (6AM - 6PM)	NIGHT THRU TRAINS (6PM - 6AM)	TOTAL DAILY TRAINS	AADT VOLUMES
614.49	60	79	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	FLOMATON	ABRAMS RD	8	6	14	20
614.96	60	79	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	FLOMATON	DUGOUT LN	8	6	14	60
615.38	74	79	RR UNDER	PUBLIC	FLASHING LIGHTS	ESCAMBIA	ATMORE	US 31	9	9	18	1
616.51	60	79	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	ATMORE	COWPEN CREEK RD	8	6	14	960
616.76	60	79	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	ATMORE	N CANOE RD	7	6	13	680
617.29	60	79	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	ATMORE	TUMBLING LN	8	6	14	50
617.91	30	79	AT GRADE	PRIVATE	CROSSBUCKS	ESCAMBIA	ATMORE	PRIVATE ROAD	6	6	12	
618.29	30	79	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	ATMORE	CHAPMAN RD	7	6	13	90
618.64	30	79	AT GRADE	PRIVATE	FLASHING LIGHTS	ESCAMBIA	ATMORE	PRIVATE RD	8	6	14	
619.17	30	79	AT GRADE	PRIVATE	CROSSBUCKS	ESCAMBIA	ATMORE	PRIVATE ROAD	6	6	12	
619.80	60	79	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	ATMORE	21ST AVE	8	6	14	30
620.06	60	79	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	ATMORE	18TH AVE	8	6	14	30
620.79	45	45	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	ATMORE	M LUTHER KING AVE/8TH ST	6	6	12	2980
621.19	45	45	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	ATMORE	2ND AVE	6	6	12	1730
621.43	40	45	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	ATMORE	PRESLEY ST / CARVER ST	7	6	13	4650
621.63	45	45	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	ATMORE	MAIN STREET	6	6	12	10310
621.69	45	45	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	ATMORE	TRAMMELL ST	7	6	13	3450
621.86	45	45	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	ATMORE	WILSON AVE	6	7	13	1950
622.31	5	45	AT GRADE	PRIVATE	CROSSBUCKS	ESCAMBIA	ATMORE	RAY S CIRCLE	18	17	35	50

MILE POST	MIN SPEED (MPH)	MAX SPEED (MPH)	GRADE CROSSING	CROSSING TYPE	PROTECTION TYPE	COUNTY	CITY	STREET	DAILY THRU TRAINS (6AM - 6PM)	NIGHT THRU TRAINS (6PM - 6AM)	TOTAL DAILY TRAINS	AADT VOLUMES
623.01	45	45	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	ATMORE	SWIFT MILL RD	8	6	14	1570
623.37	50	55	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	ATMORE	DEAS ST / INDUSTRIAL DR	6	7	13	850
624.45	50	55	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	ATMORE	BYRNE DRIVE	6	7	13	20
624.91	30	55	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	ATMORE	PINEHAVEN RD	9	6	15	20
626.01	30	55	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	ATMORE	JAMES RD	9	6	15	50
628.03	50	50	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	ESCAMBIA	ATMORE	JAMES RD	9	6	15	190
630.05	10	50	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	BALDWIN	BAY MINETTE	CR 47	9	6	15	3150
634.29	60	79	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	BALDWIN	BAY MINETTE	DYAS RD	7	6	13	350
638.31	60	79	AT GRADE	PRIVATE	CROSSBUCKS	BALDWIN	BAY MINETTE	PRIVATE ROAD	6	6	12	
641.40	50	55	RR UNDER	PUBLIC	FLASHING LIGHTS	BALDWIN	BAY MINETTE	US 31	8	9	17	1
642.43	10	45	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	BALDWIN	BAY MINETTE	HOYLE AVE	6	6	12	3650
642.50	10	45	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	BALDWIN	BAY MINETTE	HAND AVE	6	6	12	680
642.61	10	45	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	BALDWIN	BAY MINETTE	PINE ST	6	6	12	2520
643.02	50	50	AT GRADE	PUBLIC	CROSSBUCKS	BALDWIN	BAY MINETTE	DOBSON ST / RAILROAD ST	9	6	15	10
643.17	45	50	RR UNDER	PUBLIC	FLASHING LIGHTS	BALDWIN	BAY MINETTE	SR 59	8	10	18	1
643.38	50	50	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	BALDWIN	BAY MINETTE	DOBSON AVE	7	8	15	1860
644.07	50	50	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	BALDWIN	BAY MINETTE	TALL PINES RD	9	6	15	1110
648.42	50	50	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	BALDWIN	BAY MINETTE	SR 225	7	6	13	1550

MILE POST	MIN SPEED (MPH)	MAX SPEED (MPH)	GRADE CROSSING	CROSSING TYPE	PROTECTION TYPE	COUNTY	CITY	STREET	DAILY THRU TRAINS (6AM - 6PM)	NIGHT THRU TRAINS (6PM - 6AM)	TOTAL DAILY TRAINS	AADT VOLUMES
649.66	45	50	AT GRADE	PRIVATE	NONE	BALDWIN	BAY MINETTE	PRIVATE RD.	19	18	37	
663.50	25	30	RR UNDER	PUBLIC	FLASHING LIGHTS	MOBILE	MOBILE	BAY BRIDGE RD / CR 16	11	11	22	1
665.60	25	30	AT GRADE	PUBLIC	NONE	MOBILE	MOBILE	DEKLE ST	18	18	36	2640
665.78	25	30	RR UNDER	PUBLIC	FLASHING LIGHTS	MOBILE	MOBILE	ROBERT M HOPE OVERPASS	9	11	20	1
665.90	10	30	AT GRADE	PUBLIC	NONE	MOBILE	MOBILE	WATER ST.	35	45	80	3930
665.97	25	30	AT GRADE	PUBLIC	CROSSBUCKS	MOBILE	MOBILE	ADAMS ST	7	9	16	10
666.20	40	45	AT GRADE	PUBLIC	CROSSBUCKS	MOBILE	MOBILE	ST ANTHONY ST.	7	9	16	10
666.27	25	30	RR UNDER	PUBLIC	NONE	MOBILE	MOBILE	CONVENTION CENTER	9	11	20	
666.42	30	45	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	MOBILE	MOBILE	DAUPHIN ST	8	8	16	510
666.57	30	45	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	MOBILE	MOBILE	PEDESTRIAN PATHWAY	8	8	16	10
666.80	30	45	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	MOBILE	MOBILE	MONROE ST	8	8	16	370
666.89	30	45	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	MOBILE	MOBILE	ESLAVA ST	8	8	16	320
666.98	30	45	AT GRADE	PUBLIC	FLASHING LIGHTS	MOBILE	MOBILE	MADISON ST	9	9	18	780
667.08	30	45	AT GRADE	PUBLIC	FLASHING LIGHTS	MOBILE	MOBILE	CANAL ST	8	7	15	200
667.18	10	45	AT GRADE	PUBLIC	FLASHING LIGHTS	MOBILE	MOBILE	PALMETTO ST	5	4	9	220
667.26	10	45	AT GRADE	PUBLIC	CROSSBUCKS	MOBILE	MOBILE	CHARLESTON	7	10	17	330
667.56	10	45	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	MOBILE	MOBILE	ELMIRA ST	6	5	11	1380
667.63	10	45	AT GRADE	PUBLIC	CROSSBUCKS	MOBILE	MOBILE	SHORT TEXAS ST	5	4	9	1050
668.03	10	45	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	MOBILE	MOBILE	VIRGINIA ST	6	5	11	2150
668.14	10	45	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	MOBILE	MOBILE	CONCEPTION ST	5	4	9	380
668.35	45	45	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	MOBILE	MOBILE	PILLANS ST	5	4	9	50

MILE POST	MIN SPEED (MPH)	MAX SPEED (MPH)	GRADE CROSSING	CROSSING TYPE	PROTECTION TYPE	COUNTY	CITY	STREET	DAILY THRU TRAINS (6AM - 6PM)	NIGHT THRU TRAINS (6PM - 6AM)	TOTAL DAILY TRAINS	AADT VOLUMES
668.42	45	45	AT GRADE	PUBLIC	FLASHING LIGHTS & GATES	MOBILE	MOBILE	LAWRENCE ST	5	4	9	1730
669.26	40	45	RR OVER	PUBLIC	FLASHING LIGHTS	MOBILE	MOBILE	BROAD ST	7	8	15	1

